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Ectopic Pregnancy in the United States, 1970-1986

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Summary

In 1986, both the rate of hospitalizations due to ectopic pregnancy and the number of hospitalizations decreased from those reported in the previous year, although the decreases were not statistically significant. If this leveling off of previous yearly increases becomes a continuing trend, possible explanatory hypotheses include a leveling off of disease occurrence, and an increasing use of outpatient management. The case-fatality rate rose slightly in 1986, to 4.9 deaths per 10,000 ectopic pregnancies, although this rate still represents an 86% decline from the 35.5 deaths per 10,000 ectopic pregnancies reported in 1970. In 1986, ectopic pregnancy accounted for only 1.4% of all pregnancies but was associated with over 13% of maternal deaths. Compared with white women, women of black and other minority races had a 1.6 times greater risk of ectopic pregnancy. Ectopic pregnancy remains one of the leading causes of maternal death in the United States and continues to be an important public health problem.

INTRODUCTION

In 1986, an estimated 73,700 women were hospitalized in the United States as a result of an ectopic pregnancy, bringing the number of women hospitalized for this condition since 1970 to almost 800,000. The condition occurs when a fertilized ovum implants anywhere other than the endometrial lining of the uterus (*1*). In addition to the fetal loss associated with ectopic pregnancy, the lost productivity of young women who are otherwise healthy, and the ever increasing cost of caring for these women, ectopic pregnancy has become one of the leading causes of maternal mortality and is the leading cause of maternal death during the first trimester (*2*). Ectopic pregnancies accounted for 13.2% of all maternal deaths in 1986 while representing only 1.4% of all pregnancies during that period. CDC has previously reported data on ectopic pregnancy for 1970-1985 (*3*). This surveillance report includes data for 1986 and updates previously reported data on ectopic pregnancy.

METHODS

The numbers of ectopic pregnancies presented in this report are estimated from data collected by the National Center for Health Statistics (NCHS), CDC, as part of the ongoing National Hospital Discharge Survey (NHDS). In 1986, in the NHDS, which is conducted each year, >400 nonfederal, short-stay hospitals that represented all 50 states and the District of Columbia were sampled. Demographic data, final diagnoses,

and surgical procedures were abstracted from a sample of medical records from each designated hospital. Medical records (>190,000) included in the 1986 sample were weighted to represent >34 million hospital admissions (*4*).

The diagnosis of ectopic pregnancy is based on hospital discharge records with the diagnosis code 631 according to the *International Classification of Diseases, eighth revision, adapted for use in the United States* (ICDA-8) for 1970-1978 (*5*), and on abstracts with the diagnosis code 633 according to the *ninth revision* (ICD-9) for 1979-1986 (*6*). The number of deaths resulting from ectopic pregnancy is based on U.S. vital statistics collected by NCHS. Rates for ectopic pregnancy were calculated by dividing the estimated number of ectopic pregnancies by the total number of pregnancies. "Total pregnancies" is defined as the sum of live births, legally induced abortions, and ectopic pregnancies. Data for live births were obtained from NCHS natality statistics (*7*) and data for induced abortions from CDC's abortion surveillance data system. Because 1986 abortion data were not available, 1985 abortion data were used for calculating rates. Ninety-five percent confidence intervals (CI), using the relative standard error provided by NCHS, were calculated to determine whether statistically significant differences existed between the numbers of ectopic pregnancies in 1985 and 1986 (*8,9*). The presence of overlapping CIs indicated no statistically significant changes. Case-fatality rates were calculated by dividing the number of deaths caused by ectopic pregnancy by the estimated number of ectopic pregnancies. These rates were then reported as deaths per 10,000 cases (*3*). Total "person-days hospitalized" was calculated for each year by multiplying the estimated number of ectopic pregnancies by the average length of stay.

The U.S. Department of Commerce, Bureau of Census, has defined the four geographic regions of the United States used in this report (Northeast, Midwest, South, West). For the calculation of ectopic pregnancy rates, women were grouped into three age categories: 15-24, 25-34, and 35-44 years of age. For the analysis of deaths resulting from ectopic pregnancy, women were grouped into six age categories: 15-19, 20-24, 25-29, 30-34, 35-39, and 40-44 years. Race-specific rates for the categories "white" and "black and other" were used. If race was not included in the medical records, the numbers of ectopic pregnancies were redistributed according to the racial distribution of cases for which race was recorded. The same method was used to redistribute deaths with unknown race. Estimates of the number of ectopic pregnancies have been rounded to the nearest hundred. The rounding and redistribution of cases with unknown race sometimes cause the sum of numbers to differ from the total. Rates, however, were calculated from the unrounded estimates.

RESULTS

In 1986, the numbers and rates of ectopic pregnancies decreased, reversing the previous trend, although the decrease was not statistically significant (Table 1, Figure 1) (*3*). Sixty-three percent of the ectopic pregnancies in 1986 occurred among 25- through 34-year-olds. The rate of ectopic pregnancies for white women decreased from 13.3 per 1,000 pregnancies in 1985 to 12.4 in 1986; the rate of ectopic pregnancy among women of black and other minority races also decreased, from 21.3 in 1985 to 20.1 per 1,000 pregnancies in 1986. The risk of ectopic pregnancies among women of black and other minority races remained 1.6 times higher than that among white women in 1986, the same as that reported in 1985 (*3*).

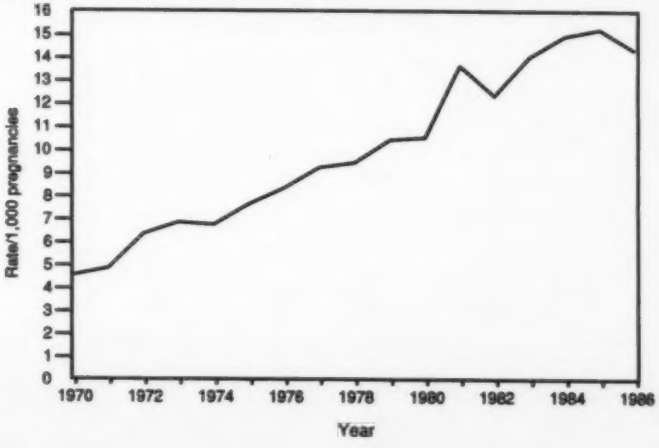
For the period 1970-1986, approximately 790,500 ectopic pregnancies occurred among women ages 15-44 years in the United States; the overall rate was 10.3 per 1,000 reported pregnancies. From 1970 through 1986, the number of ectopic

TABLE 1. Numbers and rates of ectopic pregnancies, by year, United States, 1970-1986

Year	Number*	Rate†
1970	17,800	4.5
1971	19,300	4.8
1972	24,500	6.3
1973	25,600	6.8
1974	26,400	6.7
1975	30,500	7.6
1976	34,600	8.3
1977	40,700	9.2
1978	42,400	9.4
1979	49,900	10.4
1980	52,200	10.5
1981	68,000	13.6
1982	61,800	12.3
1983	69,600	14.0
1984	75,400	14.9
1985	78,400	15.2
1986	73,700	14.3

*Rounded to nearest hundred.
†Rate per 1,000 pregnancies (live births, legally induced abortions, and ectopic pregnancies).

FIGURE 1. Ectopic pregnancy rates, by year, United States, 1970-1986



pregnancies increased more than fourfold, from an estimated 17,800 in 1970 to 73,700 in 1986. The rate for all women combined increased more than threefold, from 4.5 in 1970 to 14.3 in 1986. When stratified by race, the rates increased more than threefold for white women (from 4.0 in 1970 to 12.4 in 1986) and slightly less than threefold for women of black and other minority races (from 7.1 in 1970 to 20.1 in 1986). When numbers of ectopic pregnancies were combined into four periods (1970-1973, 1974-1977, 1978-1981, and 1982-1986) and analyzed by race, the rates for each racial group had increased from the earliest years (1970-1973) to the latest years (1982-1986) by the following factors: 2.5-fold for all races combined, 2.7-fold for white women, and almost twofold for women of black and other minority races (Table 2). The risk of ectopic pregnancy increased with age and was highest for women 35-44 years old (Table 3, Figure 2) (*1,3*). White women 35-44 years of age had almost three

TABLE 2. Numbers and rates of ectopic pregnancies by race* and selected periods, 1970-1986

	White		Black and other		All races	
Year	Number	Rate†	Number	Rate	Number	Rate
1970-1973	61,400	4.8	25,600	8.8	87,000	5.6
1974-1977	95,300	7.4	37,000	10.2	132,200	8.0
1978-1981	150,200	10.1	62,100	14.3	212,400	11.0
1982-1986	254,800	13.1	104,100	17.3	358,900	14.1
1970-1986	**561,700**	**9.3**	**228,800**	**13.6**	**790,500**	**10.3**

*Race "unknown" redistributed according to the percentage of race known, and numbers rounded to the nearest hundred. Redistribution and rounding sometimes cause the sum of individual cells not to equal the total.
†Rate per 1,000 pregnancies (live births, legally induced abortions, and ectopic pregnancies).

TABLE 3. Numbers and rates of ectopic pregnancies, by race* and age group, United States, 1970-1986

Race	Age group (years)	Number†	Rate§
White	15-44	561,700	9.3
	15-24	174,000	5.7
	25-34	331,000	12.6
	35-44	56,700	16.7
Black and other	15-44	228,800	13.6
	15-24	73,400	7.4
	25-34	125,600	21.6
	35-44	29,900	29.3
All races	15-44	790,500	10.3
	15-24	247,400	6.1
	25-34	456,600	14.3
	35-44	86,600	19.6

*Race "unknown" redistributed according to the percentage of race known. Redistribution and rounding sometimes cause the sum of individual cells not to equal the total.
†Rounded to the nearest hundred.
§Rate per 100,000 pregnancies (live births, legally induced abortions, and ectopic pregnancies).

times the risk of ectopic pregnancy as white women 15-24 years of age, whereas women of black and other minority races ages 35-44 had four times the risk as their counterparts ages 15-24.

Overall, during the period 1970-1986, the rates of ectopic pregnancies for the four geographic regions were similar; the highest rates occurred in the Midwest and West (Table 4). As in previous years, some variations in the race- and region-specific rates occurred. For white women, the rate was highest in the West; for women of black and other races, the rate was highest in the Midwest.

FIGURE 2. Ectopic pregnancy rates, by race and age group, United States, 1970-1986

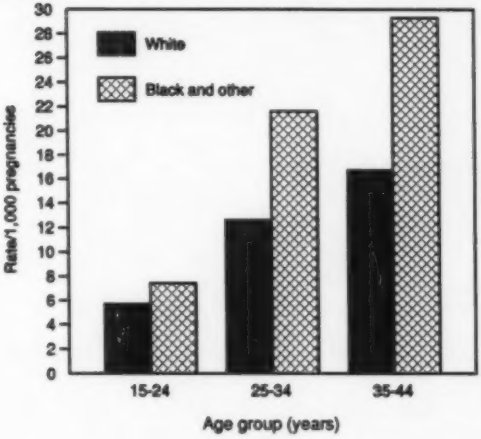


TABLE 4. Numbers and rates of ectopic pregnancies, by race* and geographic region, United States, 1970-1986

Race	Region	Number†	Rate§
White	Northeast	110,400	8.6
	Midwest	147,400	9.1
	South	154,700	8.7
	West	149,300	10.7
Black and other	Northeast	51,100	13.7
	Midwest	48,900	16.1
	South	100,800	14.2
	West	27,900	10.7
All races	Northeast	161,500	9.8
	Midwest	196,300	10.5
	South	255,500	10.3
	West	177,200	10.7

*Race "unknown" redistributed according to the percentage of race known. Redistribution and rounding sometimes cause the sum of individual cells not to equal the total.
†Rounded to the nearest hundred.
§Rate per 1,000 pregnancies (live births, legally induced abortions, and ectopic pregnancies).

The average length of hospital stay for women who had ectopic pregnancies decreased from 4.5 days in 1985 to 4.1 days in 1986, continuing a previous trend (*3*). Ectopic pregnancy accounted for 302,200 person-days of hospitalization. This total represents both a 14% decrease from that reported in 1985 and a 10% decrease in the average length of hospital stay. The average length of stay for the period 1970-1986 was 5.5 days, and the total person-days of hospitalization during that period was 4,321,300.

In 1986, 36 maternal deaths (13.2% of all such deaths) were related to ectopic pregnancy (Table 5). The case-fatality rate increased to 4.9, up from the 4.2 reported in 1985 (Figure 3). In 1986, women of black and other minority races had a case-fatality rate 2.3 times higher than that for white women.

Between 1970 and 1986, a total of 752 women died as a result of an ectopic pregnancy. Overall, the case-fatality rate has decreased >86% since the first reporting period in 1970. Women of black and other minority races continue to have a higher rate of death related to ectopic pregnancy. For the 17-year reporting period, the case-fatality rate for these women was 3.4 times higher than that for white women (Table 6). Teenagers of black and other minority races continue to have the highest rate of death associated with ectopic pregnancy. The rate for that group was almost six times higher than that reported for white teenagers (Figure 4).

DISCUSSION

In 1986, for the first time since 1982, the total number of hospitalizations for ectopic pregnancy in the United States decreased, although the decrease was not statistically

TABLE 5. Numbers of deaths due to ectopic pregnancy and case-fatality rates, by race and year, United States, 1970-1986

	Number			Rate*		
Year	White	Black and other	Total	White	Black and other	Total
1970	28	35	63	21.7	72.1	35.5
1971	21	40	61	15.1	74.9	31.7
1972	28	20	48	16.2	27.7	19.6
1973	25	21	46	15.1	23.4	18.0
1974	20	31	51	10.1	47.0	19.4
1975	19	31	50	8.8	34.9	16.4
1976	11	28	39	4.4	28.7	11.3
1977	15	29	44	5.2	24.5	10.8
1978	13	24	37	4.4	18.7	8.7
1979	20	25	45	5.7	17.2	9.0
1980	22	24	46	6.0	15.4	8.8
1981	15	19	34	3.1	9.7	5.0
1982	19	24	43	3.8	19.3	7.0
1983	17	20	37	3.3	11.2	5.3
1984	14	15	39	2.7	10.8	5.2
1985	11	22	33	2.1	8.4	4.2
1986	17	19	36	3.3	7.6	4.9
Total	**315**	**437**	**752**	**5.6**	**19.2**	**9.5**

*Deaths from ectopic pregnancy per 10,000 ectopic pregnancies.

significant. With few exceptions, the trend over the previous 17 years has been for the numbers and rates of hospitalizations for ectopic pregnancy to increase steadily. Suggested reasons for these increases include 1) higher prevalence of risk factors for this condition, lower prevalence of protective factors, or both (*10*); 2) improved diagnosis of the condition as a result of (a) heightened awareness among health-care providers of this condition and of the symptoms and signs that may occur among

FIGURE 3. Ectopic pregnancy mortality rates, by year, United States, 1970-1988

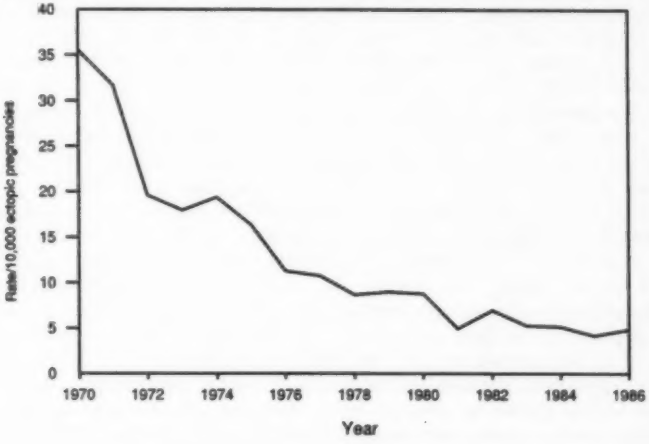


TABLE 6. Case-fatality rates for women with ectopic pregnancy, by race, age group, and geographic region, United States, 1970-1986

	White		Black and other		Total	
	No.*	Rate†	No.	Rate	No.	Rate
Age Group (years)						
15-19	25	7.2	53	41.6	78	16.5
20-24	87	6.3	119	19.6	206	10.3
25-29	117	5.8	106	14.4	223	8.1
30-34	57	4.4	89	16.9	146	8.0
35-39	24	5.1	56	23.4	80	11.3
40-44	5	5.0	14	24.4§	19	12.1
Region						
Northeast	69	6.2	102	20.0	171	10.6
Midwest	69	4.7	98	20.3	167	8.5
South	94	6.1	197	19.5	291	11.4
West	83	5.5	40	14.5	123	6.9
Total	**315**	**5.6**	**437**	**19.2**	**752**	**9.5**

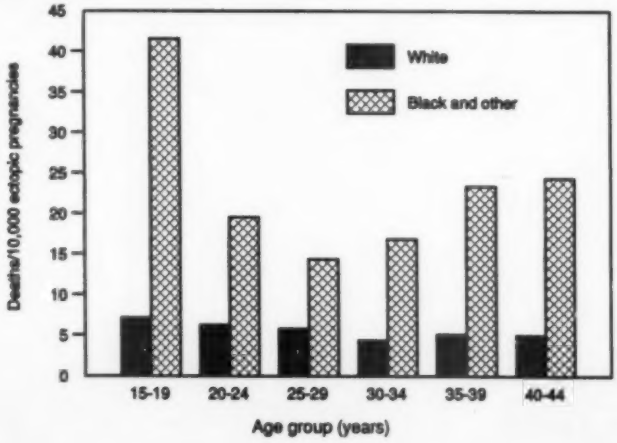
*Deaths from ectopic pregnancy.
†Deaths from ectopic pregnancy per 10,000 ectopic pregnancies.
§Rates based on <10,000 ectopic pregnancies and thus should be viewed with caution.

women of childbearing age, and (b) technologic advances such as sensitive and rapid assays of serum progesterone, improved ultrasound techniques, and laparoscopy; and 3) the recent trend of women postponing childbearing until the period of life in which the risk of ectopic pregnancy is highest (*11*). Advancing technology has certainly facilitated early diagnosis and accurate monitoring of ectopic pregnancy (*12*).

First described in the 10th century, ectopic pregnancy has been linked to multiple maternal and embryonic factors (*1,13,14*). Maternal factors include physiologic changes such as alteration in tubal motility, ovum transport, hormonal release, and anatomic changes such as tubal damage or displacement as a result of scarring conditions (e.g., endometriosis, chronic salpingitis [pelvic inflammatory disease], and tubal ligation) (*10,13*). Embryonic factors primarily include chromosomal abnormalities (*13*). The prevalence of salpingitis in relation to ectopic pregnancies has been shown to vary widely (20%-92%) (*2,10*) but is the cause most commonly agreed upon. The increase in salpingitis over the past two decades has certainly contributed, to some degree, to the reported increases in ectopic pregnancies (*2,15*).

The lack of a continued increase in hospitalizations related to ectopic pregnancy may represent a temporary fluctuation in the data, as occurred in 1982 (Table 1, Figure 1); a leveling off of increases in disease occurrence; or the impact of new techniques for outpatient management. In recent years, the technologic advances allowing for earlier diagnosis have enabled public health personnel to add new goals to that of preventing mortality: to preserve fertility and to reduce morbidity (*12*). A study involving 141 women showed that nonrupture of an ectopic pregnancy had a statistically significant, positive association with future fertility (*16*). Considerable importance is thus placed on carefully controlled and conservative management of women diagnosed very early with unruptured ectopic pregnancies. Medical management for this group of women may include the use of serial pregnancy tests, serum

FIGURE 4. Ectopic pregnancy case-fatality rates, by race and age group, United States, 1970-1986



progesterone assays, and ultrasound examinations, with or without the use of methotrexate, known for its effectiveness against trophoblastic disease and sometimes used on an outpatient basis (*17-20*). Several studies in which methotrexate has been used have shown effective resolution of ectopic pregnancies, without hospitalization or operation, in 95% of cases (*12,18*); however, the number of women so treated was less than 100, and this regimen is still regarded as experimental. Another recent innovation is laparoscopic management of unruptured ectopic pregnancy, which results in lower morbidity, shorter hospitalization, and lower cost to the patient (*21*). The laparoscope is used either for removing a segment of affected fallopian tube or for opening up the tube and removing the products of conception (*12,22*). These innovations may contribute to an increasing number of ectopic pregnancies managed on an outpatient basis.

In 1986, the risk of ectopic pregnancy among women of black and other minority races remained 1.6 times higher than that among white women (*3*). The risk of death associated with ectopic pregnancy increased for white women, whereas it decreased for women of black and other minority races. Nonetheless, teenagers of black and other minority races continued to have the highest death rate related to ectopic pregnancy (5.7 times higher than that of white teenagers). Factors such as timing and quality of prenatal care are often related to deaths associated with ectopic pregnancy. Even though new technology may be reducing the number of deaths caused by ectopic pregnancies, women of black and other minority races and younger women, who tend to have less and later prenatal care, benefit less from this technology than other women (*23,24*).

References

1. Pritchard JA, MacDonald PC, Gant NF. Williams obstetrics. 17th ed. Norwalk, Connecticut: Appleton-Century Croft, 1985:423-38.
2. Centers for Disease Control. Ectopic pregnancy in the United States, 1970-1983. In: CDC surveillance summaries, August 1986. MMWR 1986;35(no. 2SS):29SS-37SS.
3. Centers for Disease Control. Ectopic pregnancy surveillance, United States, 1970-1985. In: CDC surveillance summaries, December 1988;37(no. SS-5):9SS-18SS.
4. National Center for Health Statistics, Graves EJ. Utilization of short-stay hospitals, United States: 1986 annual summary. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, 1988:55; DHHS publication no. (PHS)88-1757. (Vital and health statistics; series 13, no. 96).
5. National Center for Health Statistics. International classification of diseases, adapted for use in the United States, eighth revision. Washington, DC: USDHEW, PHS, 1968; PHS publication no. 1693.
6. The Commission on Professional and Hospital Activities. International classification of diseases, ninth revision, clinical modification. Ann Arbor, Michigan: USDHHS, PHS, 1978.
7. National Center for Health Statistics. Vital statistics of the United States, 1986. Vol 1, Natality. Washington, DC: Public Health Service, 1988:1,87,89.
8. National Center for Health Statistics, Graves EJ. Utilization of short-stay hospitals, United States, 1985. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, 1987:55; DHHS publication no. (PHS)87-1752. (Vital and health statistics; series 13, no. 91).
9. National Center for Health Statistics, Graves EJ. Utilization of short-stay hospitals, United States: 1986 annual summary. Hyattsville, Maryland: US Department of Health and Human Services, Public Health Service, 1988:55; DHHS publication no. (PHS)88-1757. (Vital and health statistics; series 13, no. 96).
10. Chow WH, Daling JR, Cates W Jr, Greenberg RS. Epidemiology of ectopic pregnancy. Epidemiol Rev 1987;9:70-94.
11. Pebley AR. Changing attitudes toward the timing of first births. Fam Plann Perspect 1981; 13:171-5.

12. Vermesh M. Conservative management of ectopic gestation. Fertil Steril 1989;51:559-67.
13. Weckstein LN. Current perspective on ectopic pregnancy. Obstet Gynecol Surv 1985;40:259-72.
14. Barnes AB, Wennberg CN, Barnes BA. Ectopic pregnancy: incidence and review of determinant factors. Obstet Gynecol Surv 1983;38:345-56.
15. Washington A, Cates W, Zaidi A. Hospitalizations for pelvic inflammatory disease: epidemiology and trends in the United States, 1975 to 1981. JAMA 1984;251:2529-33.
16. Ectopic pregnancy. In: Droegemueller W, Herbst A, Mishell D Jr, Stenchever M, eds. Comprehensive gynecology. St. Louis: CV Mosby, 1987:406.
17. Carson S, Stovall T, Umstot E, Andersen R, Ling F, Buster J. Rising human chorionic somatomammotroppin predicts ectopic pregnancy rupture following methotrexate chemotherapy. Fertil Steril 1989;51:593-7.
18. Stovall G, Ling F, Buster J. Outpatient chemotherapy of unruptured ectopic pregnancy. Fertil Steril 1989;51:435-8.
19. Garcia A, Aubert J, Sama J, Josimovich J. Expectant management of presumed ectopic pregnancies. Fertil Steril 1987;48:395-400.
20. Matthews C, Coulson P, Wild R. Serum progesterone levels as an aid in the diagnosis of ectopic pregnancy. Obstet Gynecol 1986;68:390-4.
21. Brumsted J, Kessler C, Gibson C, Nakamija S, Riddick D, Gibson M. A comparison of laparoscopy and laparotomy for the treatment of ectopic pregnancy. Obstet Gynecol 1989;71:889-92.
22. Silva P. A laparoscopic approach can be applied to most cases of ectopic pregnancy. Obstet Gynecol 1988;72:944-7.
23. National Center for Health Statistics. Health, United States, 1984. DHHS publication no. (PHS)85-1232. Washington, DC: Public Health Service, December 1984:10-1.
24. National Center for Health Statistics: Health, United States, 1986. DHHS publication no. (PHS)87-1232. Washington, DC: Public Health Service, December 1986:25.

Abortion Surveillance, United States, 1984-1985

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Summary

Since 1983, the number of legal abortions reported to CDC increased by 5% to 1,333,521 in 1984; in 1985, that number decreased by less than 1% to 1,328,570. The national abortion rate was the same for both years—24 per 1,000 females ages 15-44 years. The abortion ratio for 1984 was 364 legally induced abortions per 1,000 live births; the ratio for 1985 was 354 per 1,000. Abortion ratios were higher among women of black and other minority races and among women younger than 15 years of age. Women undergoing legally induced abortions tended 1) to be young, white, and unmarried, 2) to have had no previous live births, and 3) to be having the procedure for the first time. Curettage was the procedure used in 96% of the reported cases. Eleven deaths were associated with legally induced abortions in 1984, and six in 1985. The case-fatality rate in 1985 was 0.5 deaths per 100,000 legally induced abortions, down from the 0.8 per 100,000 reported in 1983 and 1984. Overall, since 1980, the numbers and rates of abortion have had only slight year-to-year fluctuations. The steady increase in the percentage of repeat abortions since 1972 reflects the ongoing availability of legal abortions. Since the beginning of CDC's abortion mortality surveillance, the number of deaths related to legal abortions has decreased 75%, from 24 deaths in 1972 to six deaths in 1985.

INTRODUCTION

In 1969, CDC began abortion surveillance to document the number and characteristics of women obtaining abortions and to assist in efforts to eliminate preventable morbidity and mortality associated with abortions. This report presents abortion data reported to CDC for 1984 and 1985.

MATERIALS AND METHODS

For 1984 and 1985, CDC received statistics from 52 reporting areas: 50 states, New York City, and the District of Columbia. Central health agencies reported data for 44 areas, and hospitals and other medical facilities reported data for the other eight. Total numbers of abortions were available from all reporting areas, most of which also provided information on the characteristics of women obtaining abortions (Tables 1 and 2). After unknown values were excluded, percentage distributions were calculated for these characteristics. Data are reported by state of occurrence unless otherwise noted.

Abortion-related deaths reported to CDC are investigated by medical epidemiologists to determine the type of abortion, the cause of death, and possible contributing factors that may have been preventable. Deaths are first classified as abortion related or not abortion related. Abortion-related deaths are further classified into induced (legally or illegally) or spontaneous abortions. Classification of all deaths is based on information obtained from death certificates, medical records, and autopsy reports. Since CDC began abortion mortality surveillance in 1972, approximately two-thirds of abortion-related deaths have been reported by state health agencies. The remainder have been identified through other sources—CDC's National Center for Health Statistics, state and local maternal mortality committees, the Commission on Professional and Hospital Activities, case histories published in professional journals, and other private sources.

RESULTS

In 1984, 1,333,521 legal abortions were reported—5% more than the number reported for the previous year (*1*). In 1985, the number decreased to 1,328,570, a reduction of less than 1% from the 1984 figure. The national abortion rate increased from 23 abortions per 1,000 women ages 15-44 in 1983 to 24 per 1,000 in both 1984 and 1985. The abortion ratio increased from 349 abortions per 1,000 live births in 1983 to 364 per 1,000 in 1984, and then fell to 354 per 1,000 in 1985 (Table 1, Figures 1-3).

In 1984 and 1985, as in previous years, California reported the highest number of abortions, followed by New York City and Texas (*2*). Wyoming had the lowest number of abortions in those years—498 in 1984 and 436 in 1985. The abortion rates in those years ranged from four abortions per 1,000 women ages 15-44 in Kentucky and Wyoming to more than 100 per 1,000 in the District of Columbia. The abortion ratios were highest in the District of Columbia and New York City (the only reporting areas that are not states) and lowest in Kentucky and Wyoming.

Approximately 92% of women obtaining abortions had the procedure done within their state of residence. The percentage of abortions obtained by out-of-state residents ranged from approximately 50% in the District of Columbia during 1984 and 1985 to approximately 1% in Hawaii, Illinois, and Wyoming in 1984 and Hawaii and Wyoming in 1985 (Tables 3 and 4). Data on the percentage of abortions obtained by out-of-state residents are not available for eight reporting areas.

In 1984, 36 states, the District of Columbia, and New York City reported legal abortions by age; in 1985, 37 states, the District of Columbia, and New York City reported those figures. In both years, women 15-29 years of age had approximately 80% of all abortions, whereas women younger than 15 years of age had approximately 1% (Tables 5 and 6). The abortion ratio was highest for women under 15 years of age and second highest for women 15-19 years of age. The abortion ratio for women under 15 years of age was 1,439 abortions per 1,000 live births in 1984 and 1,376 per 1,000 in 1985; the ratio for women 15-19 years of age was 697 per 1,000 live births in 1984 and 688 per 1,000 in 1985 (Figure 4). Although teenagers' abortion ratios were the highest during 1984-1985, the proportion of legal abortions they obtained continued to decrease. In 1984 and 1985, teenagers had 26% of all legal abortions. Among that age group, the abortion ratio was lowest among 19-year-olds and highest among those younger than 15 years old (Tables 7 and 8).

In 1984 and 1985, approximately 48% of reported legal abortions were performed before 8 weeks of gestation, and 87% were done at or before 12 weeks of gestation

(Tables 9 and 10). Less than 4% of the abortions for those 2 years were performed at 16-20 weeks of gestation, and less than 1% at 21 or more weeks of gestation.

In both years, approximately 96% of legal abortions were performed by curettage (Tables 11 and 12). In less than 2%, the method used was intrauterine saline or prostaglandin instillation.

In 1984 and 1985, approximately two-thirds of women obtaining legal abortions were white (Table 13); this finding continued a previously noted trend (*2*). The abortion ratio, however, was higher for black women and women of other minority races than for white women: 475 versus 288 abortions per 1,000 live births in 1984 and 472 versus 277 abortions per 1,000 in 1985.

The percentage of women undergoing legal abortions who were unmarried rose from 73% in 1983 to 78% in 1984, and then to almost 80% in 1985. The abortion ratio was 14 times higher for unmarried women than for married women: 1,267 versus 93 abortions per 1,000 live births in 1984 and 1,174 versus 80 per 1,000 in 1985 (Table 14).

In both years, more than 55% of the women obtaining legal abortions had had no previous live births, and about 91% had had two or fewer live births (Table 15). In both 1984 and 1985, the abortion ratio was highest for women who had had no live births and lowest for women who had had one live birth.

Approximately 58% of women obtaining abortions in 1984 and 1985 had the procedure for the first time, but more than 13% had had at least two previous abortions (Table 16).

When the proportions of women undergoing abortions were analyzed by age group and marital status, few differences were reported between white women and women of black and other minority races (Tables 17 and 18). However, the proportion of black and other minority women <15 having abortions was more than twice that of white women in this age group.

When analyzed by gestational age, more than 99% of abortions at 12 weeks of gestation or less were performed by curettage (Tables 19 and 20). After 12 weeks of gestation, the most common procedure was dilatation and evacuation (D&E). Most intrauterine instillations involved the use of saline and were performed at 16 weeks of gestation or later.

In 1984, according to information reported to CDC, 18 women died as a result of abortion (Table 21). Of the 18 deaths, 11 were associated with a legally induced abortion, and six with a spontaneous abortion. In 1985, 14 women died as a result of abortion. Of these, six were associated with a legally induced abortion, six with a spontaneous abortion, one with an illegally induced abortion, and one could not be classified. The updated total for 1983 showed 18 deaths as a result of abortion. Included in this total were two additional reported deaths associated with legal abortion, raising the preliminary case-fatality rate for legal abortion from 0.7 deaths per 100,000 abortions to 0.8 deaths per 100,000 for that year. In 1984, the case-fatality rate remained at 0.8 deaths per 100,000 legally induced abortions, but then fell to 0.5 per 100,000 in 1985.

DISCUSSION

From 1969 to 1982, the reported number of legal abortions in the United States increased every year (Figure 1); the largest percentage increase occurred in the period 1969-1973. From 1976 to 1982, this annual increase declined continuously, reaching a low of 0.2% for 1981-1982. Although in 1983 the reported number of legal

abortions declined for the first time since abortion surveillance began, since 1980 the numbers, as well as the rates and ratios of abortion, have had only small year-to-year fluctuations (*1*).

From 1969 to 1980, the abortion ratio increased each year, but from 1980 to 1983 it declined each year (Figure 2). Although this ratio increased in 1984 to 364 abortions per 1,000 live births, it fell to 354 per 1,000 in 1985. The abortion rate also increased each year through 1980, when it reached 25 abortions per 1,000 females ages 15-44; it declined to 24 per 1,000 in 1981. Since that time, the rate has remained stable at approximately 24 per 1,000 (Figure 3).

The numbers of legal abortions reported to CDC in 1984 and 1985 were probably lower than the numbers actually performed. These numbers are based primarily on information provided by central health agencies, whose totals have been consistently lower than those obtained by direct surveys. For instance, in both 1984 and 1985, the total number of abortions reported by CDC was approximately 16% lower than that reported by the Alan Guttmacher Institute, a private organization that obtains information by direct survey of abortion providers (*3*). Because of the consistency of CDC's data collection method, however, the characteristics reported here are believed to reflect the overall characteristics of women obtaining abortions in the United States.

In each year from 1975 to 1985, at least 89% of abortions were performed in the woman's state of residence. In addition, the number of women obtaining an abortion in their state of residence increased from 89% in 1975 to 93% in 1983, but then fell to approximately 92% for both 1984 and 1985.

In 1972, the women obtaining abortions were almost evenly distributed among three age groups: 19 years of age or less, 20-24 years of age, and 25 or more years of age. Between 1972 and 1985, the number of teenagers obtaining abortions decreased steadily from 33% to 26%. Upward shifts in the age of women in the population may account for the continuing greater proportion, in 1984 and 1985, of abortions obtained by women 20 years of age and older. In 1975, approximately 78% of women ages 15-44 were over age 20. In 1980, that figure increased to 80%, and by 1985 the proportion of women over 20 had increased to approximately 84% (*4,5*).

Of the women who obtained abortions between 1972 and 1985, the proportion who were unmarried women increased steadily, from 70% to 81%. The percentages who were black or of other minority races increased from 23% to 33%, and the percentage who had had one or no previous live births increased from 67% to 77%. When abortions are studied by gestational age, the percentage distribution has been stable since 1977.

In 1984 and 1985, the trend continued for fewer women to obtain abortions for the first time; these women had accounted for 87% of all abortions in 1974 but accounted for only 57% in 1985. During this 11-year period, the percentage of women who previously had had one induced abortion increased from 11.3% to 25.0%; those who had had two induced abortions increased from 1.5% to 9.6%; and those who had had three or more induced abortions increased from 0.4% to 4.7%. These increases reflect both the ongoing availability of abortions and the fact that women who have had an abortion are more likely to have another (*6-8*).

Between 1972 and 1985, the percentage of abortions performed by curettage increased from 88.6% to 97.5%. Surveillance during the same period showed declines

in the percentages of abortions performed by intrauterine instillation (from 10.4% to 1.7%) and by hysterectomy and hysterotomy (from 0.6% to 0.1%).

Between 1975 and 1985, the percentage of second-trimester abortions performed by D&E increased from 33% to 77%. During the same period, the percentage of second-trimester abortions performed by intrauterine instillation decreased from 57% to 16%. These changes most likely reflect improved technology and physicians' awareness that a lower risk of complications is associated with D&Es than with instillation procedures (*9*).

Since CDC's surveillance of abortion mortality began in 1972, 93% fewer deaths have occurred. In 1972, 90 women died as a result of abortion. Of those, 24 (27%) were related to a legally induced abortion and 39 (43%) to an illegal abortion. In 1985, seven women died as a result of induced abortion; of those, six resulted from a legal abortion and one from an illegal abortion. In addition to the 75% drop in the number of deaths resulting from legal abortions, the case-fatality rate fell from 4.1 to 0.5 deaths per 100,000 legal abortions.

References

1. CDC. Abortion surveillance: preliminary analysis—United States, 1984, 1985. MMWR 1988; 37:713-4.
2. CDC. Abortion surveillance, 1982-1983. In: CDC Surveillance Summaries, February 1987. MMWR 1987;36(no. 1SS):11SS-42SS.
3. Henshaw SK, Forrest JD, VanVort J. Abortion services in the United States, 1984 and 1985. Fam Plann Perspect 1987;19:63-70.
4. Estimates of population of the United States by age, sex, and race: 1974 to 1976. Current population reports, series P-25, no. 643. Washington, DC: Bureau of Census, US Department of Commerce, 1977:14.
5. Estimates of population of the United States by age, sex, and race: 1980 to 1987. Current population reports, series P-25, no. 1022. Washington, DC: Bureau of Census, US Department of Commerce, 1988:13-7.
6. Tietze C. Repeat abortion—why more? Fam Plann Perspect 1978;10:286-8.
7. Tietze C, Jain A. The mathematics of repeat abortion: explaining the increase. Stud Fam Plann 1978;9:294-9.
8. Tietze C, Bougaarts J. Repeat abortion in the United States: new insights. Stud Fam Plann 1982;13:373-9.
9. Cates W Jr, Schulz KF, Grimes DA, et al. Dilatation and evacuation procedures and second-trimester abortion: the role of physician skill and hospital setting. JAMA 1982;248: 559-63.

TABLE 1. Characteristics of women obtaining abortions, United States, 197

Characteristics	1972	1973	1974	1975	1976	1977	1978	1
Reported number of legal abortions	586,760	615,831	763,476	854,853	988,267	1,079,430	1,157,776	1,251,
Ratio*	180.1	196.3	241.6	271.9	312.0	324.5	347.3	3
Rate†	13	14	17	18	21	22	23	
							Percentage	Di
Residence								
Abortion in-state	56.2	74.8	86.6	89.2	90.0	90.0	89.3	
Abortion out-of-state	43.8	25.2	13.4	10.8	10.0	10.0	10.7	
Age (years)								
≤19	32.6	32.7	32.7	33.1	32.1	30.8	30.0	
20-24	32.5	32.0	31.8	31.9	33.3	34.5	35.0	
≥25	34.9	35.3	35.6	35.0	34.6	34.7	34.9	
Race								
White	77.0	72.5	69.7	67.8	66.6	66.4	67.0	
Other	23.0	27.5	30.3	32.2	33.4	33.6	33.0	
Marital status								
Married	29.7	27.4	27.4	26.1	24.6	24.3	26.4	
Unmarried	70.3	72.6	72.6	73.9	75.4	75.7	73.6	
Number of live births‡								
0	49.4	48.6	47.8	47.1	47.7	53.4	56.6	
1	18.2	18.8	19.6	20.2	20.7	19.1	19.2	
2	13.3	14.2	14.8	15.5	15.4	14.4	14.1	
3	8.7	8.7	8.7	8.7	8.3	7.0	5.9	
≥4	10.4	9.7	9.0	8.6	7.9	6.2	4.2	

, 1972-1985

1979	1980	1981	1982	1983	1984	1985
1,251,921	1,297,606	1,300,760	1,303,980	1,268,987	1,333,521	1,328,570
358.3	359.2	358.4	354.3	348.7	364.1	353.8
24	25	24	24	23	24	24
ge Distribution[5]						
90.0	92.6	92.5	92.9	93.3	92.0	92.4
10.0	74.0	75.0	71.0	67.0	8.0	7.6
30.0	29.2	28.0	27.1	27.1	26.4	26.3
35.4	35.5	35.3	35.1	34.7	35.3	34.7
34.6	35.3	36.7	37.8	38.2	38.3	39.0
68.9	69.9	69.9	68.5	67.6	67.4	66.6
31.1	30.1	30.1	31.5	32.4	32.6	33.4
24.7	23.1	22.1	22.0	21.4	20.5	19.3
75.3	76.9	77.9	78.0	78.6	79.5	80.7
58.1	58.4	58.3	57.8	57.1	57.0	56.3
19.1	19.5	19.7	20.3	20.7	20.9	21.6
13.8	13.7	13.7	13.9	14.2	14.4	14.5
5.5	5.3	5.3	5.1	5.2	5.1	5.1
3.5	3.2	3.0	2.9	2.8	2.6	2.5

TABLE 1. Characteristics of women obtaining abortions, United States,

Characteristics	1972	1973	1974	1975	1976	1977	1978
Type of procedure							
Curettage	88.6	88.4	89.7	90.9	92.8	93.8	94.6
Suction	*65.2*	*74.9*	*77.4*	*82.5*	*82.6*	*90.8*	*90.2*
Sharp	*23.4*	*13.5*	*12.3*	*8.4*	*10.2*	*3.0*	*4.4*
Intrauterine instillation	10.4	10.4	7.8	6.2	6.0	5.4	3.9
Hysterotomy/ hysterectomy	0.6	0.7	0.6	0.4	0.2	0.2	0.1
Other	0.5	0.6	1.9	2.4	0.9	0.7	1.4
Weeks of gestation							
≤8	34.0	36.1	42.6	44.6	47.0	51.2	52.2
9-10	30.7	29.4	28.7	28.4	28.0	27.2	26.9
11-12	17.5	17.9	15.4	14.9	14.4	13.1	12.3
13-15	8.4	6.9	5.5	5.0	4.5	3.4	4.0
16-20	5.2	8.0	6.5	6.1	5.1	4.3	3.7
≥21	1.3	1.7	1.2	1.0	0.9	0.9	0.9

*Abortions per 1,000 live births.
†Abortions per 1,000 females 15-44 years of age.
§Excludes unknowns. Since the number of states reporting each characteristic varie
caution.
‖For years 1972-1977, data indicate number of living children.
¶<0.05%

tes, 1972-1985 — Continued

78	1979	1980	1981	1982	1983	1984	1985
.6	95.0	95.5	96.1	96.4	96.8	96.8	97.5
.2	*91.3*	*89.8*	*90.4*	*90.6*	*91.1*	*93.1*	*94.6*
.4	*3.7*	*5.7*	*5.7*	*5.8*	*5.7*	*3.7*	*2.9*
.9	3.3	3.1	2.8	2.5	2.1	1.9	1.7
.1	0.1	0.1	0.1	0.0[1]	0.0	0.0	0.0
.4	1.6	1.3	1.0	1.0	1.1	1.3	0.8
.2	52.1	51.7	51.2	50.6	49.7	50.5	50.3
.9	27.0	26.2	26.8	26.7	26.8	26.4	26.6
.3	12.5	12.2	12.1	12.4	12.8	12.6	12.5
.0	4.2	5.2	5.2	5.3	5.8	5.8	5.9
.7	3.4	3.9	3.7	3.9	3.9	3.9	3.9
.9	0.9	0.9	1.0	1.1	1.0	0.8	0.8

varies from year to year, temporal comparisons should be made with

TABLE 2. Source of abortion reporting, number of reported abortions, and abortion ratio and rate, by year, United States, selected years

	1972	1976	1980	1983	1984	1985
Number of reporting areas* that report data through central health agency	21	41	47	46	44	44
Number of reporting areas that report data through hospitals and other medical facilities	8	11	5	6	8	8
Total number of abortions reported to CDC	586,760	988,267	1,297,606	1,268,987	1,333,521	1,328,570
Abortion ratio (abortions per 1,000 live births)	180.1	312.0	359.2	348.7	364.1	353.8
Abortion rate (abortions per 1,000 females ages 15-44)	13	21	25	23	24	24

*The 52 reporting areas consist of 50 states, New York City, and the District of Columbia.

TABLE 3. Reported number of legal abortions, abortion ratios and rates, and percentage of abortions obtained by out-of-state residents, by state of occurrence, 1984

State	Abortions*	Ratio†	Rate§	Percentage of abortions obtained by out-of-state residents¶
Alabama	16,005¶	270	18	8.00
Alaska	1,666¶	134	13	–
Arizona	14,874	270	23	2.54
Arkansas	6,669**	192	13	2.19
California	297,730	665	48	–
Colorado	17,550	323	23	5.21
Connecticut	19,534	463	26	2.86
Delaware	4,668	537	31	–
D. of Columbia	23,132	††	§§	50.40
Florida	50,507	325	22	–
Georgia	34,30[illegible]	372	25	8.96
Hawaii	5,334	286	22	1.07
Idaho	2,394	132	11	8.19
Illinois	60,854¶	339	23	1.10
Indiana	15,343	192	12	3.34
Iowa	6,045¶	143	9	8.21
Kansas	7,303	183	13	36.82
Kentucky	3,343¶	63	4	–
Louisiana	19,110	235	18	–
Maine	4,412	265	16	14.56
Maryland	25,151	385	24	5.35
Massachusetts	31,876	408	24	–
Michigan	42,062	310	19	3.13

TABLE 3. Reported number of legal abortions, abortion ratios and rates, and percentage of abortions obtained by out-of-state residents, by state of occurrence, 1984 — Continued

State	Abortions*	Ratio†	Rate§	Percentage of abortions obtained by out-of-state residents¶
Minnesota	17,314	260	17	9.85
Mississippi	4,585	105	8	6.22
Missouri	20,204	271	18	14.35
Montana	3,618	256	18	20.01
Nebraska	5,995	230	16	20.10
Nevada	5,742	376	26	14.12
New Hampshire	4,801**	337	21	26.39
New Jersey	31,236	309	17	2.55
New Mexico	5,202	190	17	3.33
New York	152,486	617	37	4.46
(City)	96,802††	912		3.53
(Upstate)	55,684	395		6.07
N. Carolina	34,458	401	23	4.79
N. Dakota	2,872	243	19	46.87
Ohio	41,666	263	17	6.07
Oklahoma	8,508¶	156	11	28.10
Oregon	13,133	322	20	8.65
Pennsylvania	59,258	378	22	4.72
Rhode Island	7,422	587	32	24.39
S. Carolina	11,704	231	14	4.93
S. Dakota	1,673	135	10	26.06
Tennessee	21,124	325	19	18.12
Texas	81,207	272	21	5.98
Utah	4,022	105	11	5.70
Vermont	3,423	431	26	28.75
Virginia	31,550	382	23	5.64
Washington	27,783	403	26	6.80
West Virginia	3,347¶	136	8	7.89
Wisconsin	18,836	258	17	—
Wyoming	498	51	4	1.41
TOTAL	**1,333,521**	**364**	**24**	**7.97**

*Abortion data from central health agency unless otherwise noted.
†Abortions per 1,000 live births (live-birth data from central health agency except for Alabama, Alaska, Florida, Illinois, Iowa, Kentucky, New Hampshire, Oklahoma, and West Virginia. Live-birth data for these states from National Center for Health Statistics, Monthly Vital Statistics Report, Vol. 4, Supplement, July 18, 1986).
§Abortions per 1,000 females ages 15-44 (number of females ages 15-44 from Bureau of the Census, Current Population Survey, March 1984, Tape Technical Documentation, Washington).
¶Based on number of abortions for which residence status of woman is known.
**Reported from hospitals and/or other medical facilities in state.
**Includes 1,426 abortions that Arkansas residents had in other states.
††More than 1,000 abortions per 1,000 live births.
§§More than 100 abortions per 1,000 females ages 15-44.
¶¶Reported from New York City Health Department.
—Not reported.

TABLE 4. Reported number of legal abortions, abortion ratios and rates, and percentage of abortions obtained by out-of-state residents, by state of occurrence, 1985

State	Abortions*	Ratio†	Rate§	Percentage of abortions obtained by out-of-state residents¶
Alabama	15,652[†]	262	18	6.10
Alaska	1,966[†]	153	14	–
Arizona	15,604	263	22	2.70
Arkansas	6,561**	187	12	2.79
California	304,130	646	49	–
Colorado	15,553	282	20	5.94
Connecticut	19,729	449	26	2.66
Delaware	4,549	507	30	–
D. of Columbia	19,541	††	§§	51.38
Florida	53,011	324	21	–
Georgia	35,751	371	25	8.07
Hawaii	5,670	310	25	1.27
Idaho	2,252	128	10	7.78
Illinois	61,986[†]	343	22	2.10
Indiana	15,174	188	12	3.34
Iowa	5,987[†]	145	9	7.50
Kansas	6,455	164	11	37.91
Kentucky	3,216[†]	61	4	–
Louisiana	18,135	223	17	–
Maine	4,445	263	16	14.74
Maryland	24,434	359	23	5.62
Massachusetts	35,136	430	24	–
Michigan	42,678	309	19	2.99
Minnesota	17,686	262	19	9.33
Mississippi	5,288	122	9	6.32
Missouri	19,482	254	16	13.96
Montana	3,291	244	16	17.59
Nebraska	6,012	235	16	20.18
Nevada	6,401	407	28	12.39
New Hampshire	4,823[†]	312	20	28.30
New Jersey	31,266	297	17	2.86
New Mexico	4,801	175	14	3.19
New York	156,435	613	37	3.99
(City)	101,053[††]	916		3.58
(Upstate)	55,382	382		4.73
N. Carolina	32,923	368	23	5.31
N. Dakota	2,826	242	18	48.62
Ohio	36,263	226	14	5.69
Oklahoma	8,495[†]	160	11	23.90
Oregon	12,056	296	19	8.34
Pennsylvania	53,465	334	19	4.51

TABLE 4. Reported number of legal abortions, abortion ratios and rates, and percentage of abortions obtained by out-of-state residents, by state of occurrence, 1985 — Continued

State	Abortions*	Ratio†	Rate§	Percentage of abortions obtained by out-of-state residents¶
Rhode Island	7,778	598	33	24.13
S. Caroiina	11,578	223	15	5.46
S. Dakota	1,577	130	10	24.13
Tennessee	21,069	316	19	17.22
Texas	80,211	260	21	5.90
Utah	4,129	110	12	7.70
Vermont	3,497	436	28	28.68
Virginia	31,951	372	23	5.87
Washington	26,581	379	26	6.13
West Virginia	3,326**	138	8	12.51
Wisconsin	17,309	235	15	—
Wyoming	436	47	4	1.15
TOTAL	**1,328,570**	**354**	**24**	**7.58**

*Abortion data from central health agency unless otherwise noted.
†Abortions per 1,000 live births (live-birth data from central health agency except for Alabama, Alaska, Florida, Illinois, Iowa, Kentucky, New Hampshire, Oklahoma, and West Virginia. Live-birth data for these states from National Center for Health Statistics, Monthly Vital Statistics Report, Vol. 4, Supplement, July 18, 1986).
§Abortions per 1,000 females ages 15-44 (number of females ages 15-44 from Bureau of the Census, Current Population Survey, March 1984, Tape Technical Documentation, Washington).
¶Based on number of abortions for which residence status of woman is known.
**Reported from hospitals and/or other medical facilities in state.
**Includes 1,426 abortions that Arkansas residents had in other states.
††More than 1,000 abortions per 1,000 live births.
§§More than 100 abortions per 1,000 females ages 15-44.
¶¶Reported from New York City Health Department.
—Not reported.

TABLE 5. Reported legal abortions, by age and state of occurrence, selecte

State	<15		15-19		20-24		25-29		30-34	
	No.	%	No.	%	No.	%	No.	%	No.	%
Arizona	87	0.6	3,338	22.4	5,637	37.9	3,125	21.0	1,444	9.7
Arkansas	127	1.9	2,012	30.2	2,220	33.3	1,220	18.3	669	10.0
Colorado	118	0.7	4,409	25.1	6,453	36.8	3,609	20.6	1,856	10.6
Connecticut	154	0.8	5,236	26.8	7,056	36.1	3,877	19.8	1,794	9.2
Dist. of Col.	404	1.7	4,200	18.2	6,954	30.1	5,131	22.2	3,008	13.0
Georgia	506	1.5	9,194	26.8	11,891	34.7	7,005	20.4	3,661	10.7
Hawaii	39	0.7	1,109	20.8	1,835	34.4	1,206	22.6	710	13.3
Idaho	18	0.8	649	27.2	850	35.7	461	19.3	247	10.4
Indiana	199	1.3	4,084	26.6	5,547	36.2	2,968	19.3	1,513	9.9
Kansas	81	1.1	2,138	29.3	2,626	36.0	1,367	18.7	675	9.2
Louisiana	202	1.1	3,866	20.2	5,762	30.2	3,728	19.5	1,946	10.2
Maine	36	0.8	1,351	30.6	1,537	34.8	816	18.5	402	9.1
Maryland	388	1.5	6,868	27.3	9,309	37.0	4,931	19.6	2,415	9.6
Massachusetts	200	0.6	7,322	23.0	11,537	36.2	6,964	21.8	3,655	11.5
Michigan	658	1.6	12,340	29.3	14,505	34.5	8,193	19.5	4,090	9.7
Minnesota	101	0.6	4,407	25.5	6,731	38.9	3,394	19.6	1,719	9.9
Mississippi	70	1.5	1,255	27.4	1,605	35.0	871	19.0	489	10.7
Missouri	265	1.3	5,383	26.6	7,089	35.1	4,009	19.8	2,139	10.6
Montana	29	0.8	986	27.3	1,292	35.7	706	19.5	394	10.9
Nebraska	61	1.0	1,744	29.1	2,191	36.5	1,115	18.6	550	9.2
Nevada	47	0.8	1,297	22.6	1,885	32.8	1,375	23.9	718	12.5
New Jersey	395	1.3	7,773	24.9	10,882	34.8	6,500	20.8	3,368	10.8
New Mexico	44	0.8	1,329	25.5	1,716	33.0	1,067	20.5	671	12.9
New York	1,352	0.9	33,865	22.2	51,331	33.7	33,774	22.1	18,899	12.4
(City)	908	0.9	18,333	18.9	31,073	32.1	23,738	24.5	13,665	14.1
(Upstate)	444	0.8	15,532	27.9	20,258	36.4	10,036	18.0	5,234	9.4
N. Carolina	547	1.6	10,051	29.2	12,112	35.2	6,617	19.2	3,215	9.3
N. Dakota	18	0.6	903	31.4	1,058	36.8	471	16.4	267	9.3

lected states,* 1984

34		35-39		≥40		Unknown		Total	
%	No.	%	No.	%	No.	%	No.	%
9.7	622	4.2	149	1.0	472	3.2	14,874	100.0
10.0	308	4.6	77	1.2	36	0.5	6,669	100.0
10.6	836	4.8	175	1.0	94	0.5	17,550	100.0
9.2	974	5.0	242	1.2	201	1.0	19,534	100.0
13.0	1,148	5.0	247	1.1	2,040	8.8	23,132	100.0
10.7	1,656	4.8	386	1.1	2	0.0	34,301	100.0
13.3	330	6.2	98	1.8	7	0.1	5,334	100.0
10.4	111	4.7	30	1.3	18	0.8	2,384	100.0
9.9	690	4.5	195	1.3	147	1.0	15,343	100.0
9.2	315	4.3	89	1.2	12	0.2	7,303	100.0
10.2	955	5.0	254	1.3	2,397	12.5	19,110	100.0
9.1	199	4.5	54	1.2	17	0.4	4,412	100.0
9.6	984	3.9	255	1.0	1	0.0	25,151	100.0
11.5	1,740	5.5	441	1.4	17	0.1	31,876	100.0
9.7	1,751	4.2	414	1.0	111	0.3	42,062	100.0
9.9	699	4.0	238	1.4	25	0.1	17,314	100.0
10.7	227	5.0	61	1.3	7	0.2	4,585	100.0
10.6	1,041	5.2	276	1.4	2	0.0	20,204	100.0
10.9	173	4.8	38	1.1	0	0.0	3,618	100.0
9.2	254	4.2	72	1.2	8	0.1	5,995	100.0
12.5	326	5.7	79	1.4	15	0.3	5,742	100.0
10.8	1,778	5.7	532	1.7	8	0.0	31,236	100.0
12.9	286	5.5	69	1.3	20	0.4	5,202	100.0
12.4	9,505	6.2	2,811	1.8	949	0.6	152,486	100.0
14.1	6,707	6.9	1,889	2.0	489	0.5	96,802	100.0
9.4	2,798	5.0	922	1.7	460	0.8	55,684	100.0
9.3	1,442	4.2	347	1.0	127	0.4	34,458	100.0
9.3	127	4.4	28	1.0	0	0.0	2,872	100.0

TABLE 5. Reported legal abortions, by age and state of occurrence, selec

State	<15		15-19		20-24		25-29		30-34	
	No.	%	No.	%	No.	%	No.	%	No.	
Ohio	231	0.6	9,695	23.3	14,774	35.5	8,454	20.3	4,487	10
Pennsylvania	723	1.2	15,426	26.0	21,307	36.0	12,250	20.7	6,040	10
Rhode Island	43	0.6	1,868	25.2	2,860	38.5	1,430	19.3	764	10
S. Carolina	170	1.5	3,224	27.5	4,135	35.3	2,319	19.8	1,177	10
S. Dakota	12	0.7	539	32.2	549	32.8	302	18.1	163	9
Tennessee	296	1.4	5,704	27.0	7,201	34.1	4,289	20.3	2,284	10
Utah	35	0.9	955	23.7	1,452	36.1	916	22.8	412	10
Vermont	21	0.6	945	27.6	1,265	37.0	635	18.6	371	10
Virginia	383	1.2	8,408	26.6	11,106	35.2	6,465	20.5	3,256	10
Washington	218	0.8	6,834	24.6	9,810	35.3	5,944	21.4	3,168	11
Wyoming	1	0.2	121	24.3	188	37.8	119	23.9	46	9
TOTAL	**8,279**	**1.1**	**190,828**	**25.0**	**266,258**	**34.9**	**157,623**	**20.7**	**82,682**	**10**
Abortion ratio†	1,439		697		399		226		200	

*All states for which data are available (36), the District of Columbia, and New York City.
†Calculated as the number of legal abortions obtained by women in a given age group per 1,0
for each state is distributed according to known age distribution for that state. Excludes stat
abortions.

selected states,* 1984 — Continued

0-34		35-39		≥40		Unknown		Total	
	%	No.	%	No.	%	No.	%	No.	%
37	10.8	2,092	5.0	631	1.5	1,302	3.1	41,666	100.0
40	10.2	2,768	4.7	693	1.2	51	0.1	59,258	100.0
64	10.3	368	5.0	85	1.1	4	0.1	7,422	100.0
77	10.1	545	4.7	134	1.1	0	0.0	11,704	100.0
63	9.7	64	3.8	33	2.0	11	0.7	1,673	100.0
84	10.8	1,043	4.9	284	1.3	23	0.1	21,124	100.0
12	10.2	182	4.5	68	1.7	2	0.0	4,022	100.0
71	10.8	165	4.8	21	0.6	0	0.0	3,423	100.0
56	10.3	1,505	4.8	404	1.3	23	0.1	31,550	100.0
68	11.4	1,447	5.2	351	1.3	11	0.0	27,783	100.0
46	9.2	12	2.4	8	1.6	3	0.6	498	100.0
32	**10.8**	**38,668**	**5.1**	**10,369**	**1.4**	**8,163**	**1.1**	**762,870**	**100.0**
00		334		640		347			

y.
per 1,000 live births to women in the same age group. "Unknown" age
s states reporting age unknown for more than 15% of women having

TABLE 6. Reported legal abortions, by age and state of occurrence, selecte

State	<15		15-19		20-24		25-29		30-34	
	No.	%	No.	%	No.	%	No.	%	No.	%
Arizona	116	0.7	3,501	22.4	5,800	37.2	3,251	20.8	1,636	10.5
Arkansas	126	1.9	1,952	29.8	2,182	33.3	1,181	18.0	642	9.8
Colorado	112	0.7	4,199	27.0	5,297	34.1	3,210	20.6	1,734	11.1
Connecticut	180	0.9	5,268	26.7	7,013	35.5	3,895	19.7	1,958	9.9
Dist. of Col.	305	1.6	3,846	19.7	5,819	29.8	4,191	21.4	2,427	12.4
Georgia	583	1.6	9,586	26.8	12,086	33.8	7,373	20.6	3,936	11.0
Hawaii	40	0.7	1,171	20.7	1,918	33.8	1,266	22.3	752	13.3
Idaho	16	0.7	612	27.2	749	33.3	459	20.4	250	11.1
Indiana	215	1.4	3,798	25.0	5,623	37.1	2,988	19.7	1,560	10.3
Kansas	79	1.2	1,912	29.6	2,202	34.1	1,228	19.0	619	9.6
Louisiana	179	1.0	3,414	18.8	4,982	27.5	3,348	18.5	1,944	10.7
Maine	32	0.7	1,379	31.0	1,526	34.3	766	17.2	418	9.4
Maryland	385	1.6	6,435	26.3	8,891	36.4	5,069	20.7	2,413	9.9
Massachusetts	201	0.6	8,153	23.2	11,330	32.2	7,487	21.3	3,920	11.2
Michigan	632	1.5	12,524	29.3	14,451	33.9	8,256	19.3	4,328	10.1
Minnesota	120	0.7	4,470	25.3	6,718	38.0	3,498	19.8	1,795	10.1
Mississippi	94	1.8	1,491	28.2	1,784	33.7	980	18.5	580	11.0
Missouri	245	1.3	4,956	25.4	6,780	34.8	4,086	21.0	2,104	10.8
Montana	30	0.9	910	27.7	1,105	33.6	657	20.0	375	11.4
Nebraska	54	0.9	1,748	29.1	2,178	36.2	1,144	19.0	547	9.1
Nevada	44	0.7	1,373	21.4	2,168	33.9	1,501	23.4	832	13.0
New Jersey	415	1.3	7,597	24.3	10,942	35.0	6,602	21.1	3,354	10.7
New Mexico	39	0.8	1,193	24.8	1,529	31.8	1,051	21.9	587	12.2
New York	1,345	0.9	34,045	21.8	52,913	33.8	34,719	22.2	19,409	12.4
(City)	941	0.9	18,961	18.8	32,711	32.4	24,568	24.3	14,036	13.9
(Upstate)	404	0.7	15,084	27.2	20,202	36.5	10,151	18.3	5,373	9.7
N. Carolina	518	1.6	9,548	29.0	11,419	34.7	6,332	19.2	3,084	9.4
N. Dakota	19	0.7	834	29.5	1,019	36.1	505	17.9	274	9.7

lected states,* 1985

34		35-39		≥40		Unknown		Total	
%	No.	%	No.	%	No.	%	No.	%
10.5	686	4.4	174	1.1	440	2.8	15,604	100.0
9.8	357	5.4	100	1.5	21	0.3	6,561	100.0
11.1	794	5.1	178	1.1	29	0.2	15,553	100.0
9.9	958	4.9	256	1.3	201	1.0	19,729	100.0
12.4	942	4.8	168	0.9	1,843	9.4	19,541	100.0
11.0	1786	5.0	400	1.1	1	0.0	35,751	100.0
13.3	402	7.1	116	2.0	5	0.1	5,670	100.0
11.1	121	5.4	29	1.3	16	0.7	2,252	100.0
10.3	694	4.6	185	1.2	111	0.7	15,174	100.0
9.6	315	4.9	88	1.4	12	0.2	6,455	100.0
10.7	906	5.0	223	1.2	3,139	17.3	18,135	100.0
9.4	232	5.2	69	1.6	23	0.5	4,445	100.0
9.9	1019	4.2	217	0.9	0	0.0	24,429	100.0
11.2	2012	5.7	608	1.7	1,425	4.1	35,136	100.0
10.1	1928	4.5	444	1.0	115	0.3	42,678	100.0
10.1	836	4.7	228	1.3	21	0.1	17,686	100.0
11.0	274	5.2	71	1.3	14	0.3	5,288	100.0
10.8	1018	5.2	290	1.5	3	0.0	19,482	100.0
11.4	170	5.2	43	1.3	1	0.0	3,291	100.0
9.1	246	4.1	92	1.5	3	0.0	6,012	100.0
13.0	380	5.9	91	1.4	12	0.2	6,401	100.0
10.7	1812	5.8	533	1.7	11	0.0	31,266	100.0
12.2	307	6.4	70	1.5	25	0.5	4,801	100.0
12.4	10078	6.4	2,814	1.8	1,112	0.7	156,435	100.0
13.9	7166	7.1	1,951	1.9	719	0.7	101,053	100.0
9.7	2912	5.3	863	1.6	393	0.7	55,382	100.0
9.4	1423	4.3	326	1.0	273	0.8	32,923	100.0
9.7	135	4.8	40	1.4	0	0.0	2,826	100.0

TABLE 6. Reported legal abortions, by age and state of occurrence, sele

State	<15		15-19		20-24		25-29		30-34	
	No.	%	No.	%	No.	%	No.	%	No.	
Ohio	250	0.7	8,575	23.6	12,669	34.9	7,334	20.2	3,937	1
Oregon	105	0.9	3,135	26.0	3,816	31.7	2,253	18.7	1,255	1
Pennsylvania	564	1.1	13,955	26.1	18,605	34.8	11,203	21.0	5,802	1
Rhode Island	54	0.7	1,897	24.4	2,901	37.3	1,615	20.8	818	1
S. Carolina	141	1.2	3,280	28.3	4,014	34.7	2,273	19.6	1,216	1
S. Dakota	14	0.9	482	30.6	534	33.9	266	16.9	163	1
Tennessee	302	1.4	5,754	27.3	7,208	34.2	4,186	19.9	2,233	1
Utah	29	0.7	925	22.4	1,461	35.4	849	20.6	525	1
Vermont	24	0.7	986	28.2	1,287	36.8	637	18.2	340	
Virginia	401	1.3	8,337	26.1	11,269	35.3	6,528	20.4	3,355	1
Washington	167	0.6	6,552	24.6	9,061	34.1	5,719	21.5	3,149	1
Wyoming	6	1.4	121	27.8	154	35.3	96	22.0	36	
TOTAL	**8,181**	**1.1**	**189,914**	**24.9**	**261,403**	**34.2**	**158,002**	**20.7**	**84,307**	**1**
Abortion ratio†	1,376		688		386		217		199	

*All states for which data are available (37), the District of Columbia, and New Y
†Calculated as the number of legal abortions obtained by women in a given age gr
"Unknown" age for each state is distributed according to known age distribution
more than 15% of women having abortions.

selected states,* 1985 — Continued

30-34		35-39		≥40		Unknown		Total	
.	%	No.	%	No.	%	No.	%	No.	%
37	10.9	1866	5.1	543	1.5	1,089	3.0	36,263	100.0
55	10.4	623	5.2	132	1.1	737	6.1	12,056	100.0
02	10.9	2677	5.0	638	1.2	21	0.0	53,465	100.0
18	10.5	381	4.9	99	1.3	13	0.2	7,778	100.0
16	10.5	552	4.8	101	0.9	1	0.0	11,578	100.0
63	10.3	66	4.2	39	2.5	13	0.8	1,577	100.0
33	10.6	1078	5.1	297	1.4	11	0.1	21,069	100.0
25	12.7	248	6.0	78	1.9	14	0.3	4,129	100.0
40	9.7	176	5.0	47	1.3	0	0.0	3,497	100.0
55	10.5	1626	5.1	415	1.3	20	0.1	31,951	100.0
49	11.8	1503	5.7	418	1.6	12	0.0	26,581	100.0
36	8.3	20	4.6	3	0.7	0	0.0	436	100.0
07	**11.0**	**40,647**	**5.3**	**10,663**	**1.4**	**10,787**	**1.4**	**763,904**	**100.0**
99		336		623		335			

ew York City.
ge group per 1,000 live births to women in the same age group.
ution for that state. Excludes states reporting age unknown for

TABLE 7. Reported legal abortions obtained by teenagers, by age, select

State	<15		15		16		17	
	No.	%	No.	%	No.	%	No.	%
Arizona	87	2.5	209	6.1	362	10.6	441	12.9
Arkansas	127	5.9	143	6.7	304	14.2	428	20.0
Colorado	118	2.6	280	6.2	645	14.2	926	20.5
Connecticut	154	2.9	308	5.7	738	13.7	1,207	22.4
Georgia	506	5.2	783	8.1	1,446	14.9	1,830	18.9
Hawaii	39	3.4	77	6.7	156	13.6	217	18.9
Idaho	18	2.7	40	6.0	86	12.9	91	13.6
Indiana	199	4.6	299	7.0	553	12.9	723	16.9
Kansas	81	3.7	152	6.8	303	13.7	453	20.4
Louisiana	202	5.0	333	8.2	387	9.5	455	11.2
Maine	36	2.6	108	7.8	203	14.6	304	21.9
Maryland	388	5.3	546	7.5	993	13.7	1,324	18.2
Minnesota	101	2.2	237	5.3	516	11.4	712	15.8
Mississippi	70	5.3	109	8.2	193	14.6	251	18.9
Missouri	265	4.7	467	8.3	753	13.3	1,089	19.3
Montana	29	2.9	65	6.4	104	10.2	193	19.0
Nebraska	61	3.4	133	7.4	251	13.9	346	19.2
Nevada	47	3.5	87	6.5	184	13.7	261	19.4
New Mexico	44	3.2	88	6.4	197	14.3	276	20.1
New York	1,352	3.8	2,302	6.5	4,315	12.3	6,823	19.4
(City)	908	4.7	1,445	7.5	2,478	12.9	3,678	19.1
(Upstate)	444	2.8	857	5.4	1,837	11.5	3,145	19.7
N. Carolina	547	5.2	838	7.9	1,539	14.5	2,061	19.4
N. Dakota	18	2.0	37	4.0	106	11.5	158	17.2
Ohio	231	2.3	603	6.1	1,235	12.4	1,853	18.7
Pennsylvania	723	4.5	1,263	7.8	2,100	13.0	3,019	18.7
Rhode Island	43	2.3	85	4.4	188	9.8	265	13.9
S. Carolina	170	5.0	200	5.9	487	14.3	659	19.4

elected states,* 1984

	18		19		Total	
%	No.	%	No.	%	No.	%
12.9	1,099	32.1	1,227	35.8	3,425	100.0
20.0	537	25.1	600	28.1	2,139	100.0
20.5	1,219	26.9	1,339	29.6	4,527	100.0
22.4	1,436	26.6	1,547	28.7	5,390	100.0
18.9	2,580	26.6	2,555	26.3	9,700	100.0
18.9	295	25.7	364	31.7	1,148	100.0
13.6	232	34.8	200	30.0	667	100.0
16.9	1,263	29.5	1,246	29.1	4,283	100.0
20.4	614	27.7	616	27.8	2,219	100.0
11.2	1,458	35.8	1,233	30.3	4,068	100.0
21.9	381	27.5	355	25.6	1,387	100.0
18.2	1,967	27.1	2,038	28.1	7,256	100.0
15.8	1,380	30.6	1,562	34.6	4,508	100.0
18.9	340	25.7	362	27.3	1,325	100.0
19.3	1526	27.0	1,548	27.4	5,648	100.0
19.0	312	30.7	312	30.7	1,015	100.0
19.2	502	27.8	512	28.4	1,805	100.0
19.4	367	27.3	398	29.6	1,344	100.0
20.1	370	26.9	398	29.0	1,373	100.0
19.4	9,829	27.9	10,596	30.1	35,217	100.0
19.1	5,091	26.5	5,641	29.3	19,241	100.0
19.7	4,738	29.7	4,955	31.0	15,976	100.0
19.4	2,752	26.0	2,861	27.0	10,598	100.0
17.2	301	32.7	301	32.7	921	100.0
18.7	2,675	26.9	3,329	33.5	9,926	100.0
18.7	4,355	27.0	4,689	29.0	16,149	100.0
13.9	622	32.5	708	37.0	1,911	100.0
19.4	918	27.0	960	28.3	3,394	100.0

TABLE 7. Reported legal abortions obtained by teenagers, by age, selec

State	<15		15		16		17	
	No.	%	No.	%	No.	%	No.	%
S. Dakota	12	2.2	21	3.8	70	12.7	131	23.8
Tennessee	296	4.9	454	7.6	831	13.9	1,010	16.8
Utah	35	3.5	64	6.5	120	12.1	140	14.1
Vermont	21	2.2	56	5.8	115	11.9	191	19.8
Virginia	383	4.4	656	7.5	1,201	13.7	1,715	19.5
Washington	218	3.1	471	6.7	975	13.8	1,445	20.5
Wyoming	1	0.8	12	9.8	14	11.5	22	18.0
TOTAL	**6,622**	**4.0**	**11,526**	**7.0**	**21,670**	**13.1**	**31,019**	**18.7**
Abortion ratio†	1,326		968		819		693	

*All states for which data are available (32), the District of Columbia, and New Yo
†Calculated as the number of legal abortions obtained by women of a given age pe
age for each state is distributed according to known age distribution for that stat

selected states,* 1984 — Continued

	18		19		Total	
%	No.	%	No.	%	No.	%
23.8	154	27.9	163	29.6	551	100.0
16.8	1,650	27.5	1759	29.3	6,000	100.0
14.1	304	30.7	327	33.0	990	100.0
19.8	247	25.6	336	34.8	966	100.0
19.5	2,375	27.0	2,461	28.0	8,791	100.0
20.5	1,917	27.2	2,026	28.7	7,052	100.0
18.0	22	18.0	51	41.8	122	100.0
18.7	**45,999**	**27.7**	**48,979**	**29.5**	**16,5815**	**100.0**
	706		563		690	

ew York City.
ge per 1,000 live births to women of the same age. "Unknown"
t state.

TABLE 8. Reported legal abortions obtained by teenagers, by age, selec

State	<15		15		16		17	
	No.	%	No.	%	No.	%	No.	%
Arizona	116	3.2	226	6.2	434	12.0	463	12.8
Colorado	112	2.6	324	7.5	627	14.5	899	20.9
Connecticut	180	3.3	339	6.2	840	15.4	1,215	22.3
Georgia	583	5.7	837	8.2	1,445	14.2	2,019	19.9
Hawaii	40	3.3	87	7.2	174	14.4	205	16.9
Idaho	16	2.5	42	6.7	71	11.3	87	13.9
Indiana	215	5.4	313	7.8	491	12.2	528	13.2
Kansas	79	4.0	163	8.2	303	15.2	432	21.7
Louisiana	179	5.0	304	8.5	421	11.7	452	12.6
Maine	32	2.3	108	7.7	185	13.1	289	20.5
Maryland	385	5.6	552	8.1	967	14.2	1,223	17.9
Minnesota	120	2.6	262	5.7	546	11.9	810	17.6
Mississippi	94	5.9	132	8.3	220	13.9	331	20.9
Missouri	245	4.7	446	8.6	670	12.9	895	17.2
Montana	30	3.2	76	8.1	125	13.3	165	17.6
Nebraska	54	3.0	112	6.2	276	15.3	354	19.6
Nevada	44	3.1	82	5.8	186	13.1	268	18.9
New Mexico	39	3.2	87	7.1	202	16.4	240	19.5
New York	1,345	3.8	2,460	7.0	4,674	13.2	6,866	19.4
(City)	941	4.7	1,577	7.9	2,677	13.5	3,856	19.4
(Upstate)	404	2.6	883	5.7	1,997	12.9	3,010	19.4
N. Carolina	518	5.1	823	8.2	1,471	14.6	2,043	20.3
N. Dakota	19	2.2	44	5.2	97	11.4	159	18.6
Ohio	250	2.8	484	5.5	1,090	12.4	1,749	19.9
Oregon	105	3.2	243	7.5	442	13.6	666	20.5
Pennsylvania	564	3.9	1,195	8.2	1,979	13.6	2,751	18.9
Rhode Island	54	2.8	116	5.9	170	8.7	287	14.7
S. Carolina	141	4.1	254	7.4	516	15.1	707	20.7

selected states,* 1985

	18		19		Total	
%	No.	%	No.	%	No.	%
12.8	1,176	32.5	1,202	33.2	3,617	100.0
20.9	1,167	27.1	1,182	27.4	4,311	100.0
22.3	1,387	25.5	1,487	27.3	5,448	100.0
19.9	2,535	24.9	2,750	27.0	10,169	100.0
16.9	298	24.6	407	33.6	1,211	100.0
13.9	237	37.7	175	27.9	628	100.0
13.2	1,205	30.0	1,261	31.4	4,013	100.0
21.7	503	25.3	511	25.7	1,991	100.0
12.6	1,196	33.3	1,041	29.0	3,593	100.0
20.5	410	29.1	387	27.4	1,411	100.0
17.9	1,811	26.6	1,882	27.6	6,820	100.0
17.6	1,349	29.4	1,503	32.7	4,590	100.0
20.9	384	24.2	424	26.8	1,585	100.0
17.2	1,493	28.7	1,452	27.9	5,201	100.0
17.6	263	28.0	281	29.9	940	100.0
19.6	492	27.3	514	28.5	1,802	100.0
18.9	424	29.9	413	29.1	1,417	100.0
19.5	334	27.1	330	26.8	1,232	100.0
19.4	9,560	27.0	10,485	29.6	35,390	100.0
19.4	5,060	25.4	5,791	29.1	19,902	100.0
19.4	4,500	29.1	4,694	30.3	15,488	100.0
20.3	2,665	26.5	2,546	25.3	10,066	100.0
18.6	278	32.6	256	30.0	853	100.0
19.8	2,397	27.2	2,855	32.4	8,825	100.0
20.6	915	28.2	869	26.8	3,240	100.0
18.9	3,968	27.3	4,062	28.0	14,519	100.0
14.7	621	31.8	703	36.0	1,951	100.0
20.7	898	26.2	905	26.5	3,421	100.0

TABLE 8. Reported legal abortions obtained by teenagers, by age, selecte

State	<15		15		16		17	
	No.	%	No.	%	No.	%	No.	%
S. Dakota	14	2.8	38	7.7	68	13.7	108	21.8
Tennessee	302	5.0	510	8.4	809	13.4	1,094	18.1
Utah	29	3.0	68	7.1	108	11.3	148	15.5
Vermont	24	2.4	75	7.4	157	15.5	181	17.9
Virginia	401	4.6	667	7.6	1,247	14.3	1,672	19.1
Washington	167	2.5	470	7.0	975	14.5	1,376	20.5
Wyoming	6	4.7	10	7.9	23	18.1	22	17.3
TOTAL	**6,502**	**4.0**	**11,949**	**7.4**	**22,009**	**13.6**	**30,704**	**18.9**
Abortion ratio†	1,296		985		837		699	

*All states for which data are available (32), the District of Columbia, and New Yor
†Calculated as the number of legal abortions obtained by women of a given age per
age for each state is distributed according to known age distribution for that state.

lected states,* 1985 — Continued

	18		19		Total	
%	No.	%	No.	%	No.	%
21.8	126	25.4	142	28.6	496	100.0
18.1	1,679	27.7	1,662	27.4	6,056	100.0
15.5	301	31.6	300	31.4	954	100.0
17.9	289	28.6	284	28.1	1,010	100.0
19.1	2,290	26.2	2,461	28.2	8,738	100.0
20.5	1,807	26.9	1,927	28.7	6,722	100.0
17.3	28	22.0	38	29.9	127	100.0
18.9	**44,486**	**27.4**	**46,697**	**28.8**	**162,347**	**100.0**
99	693		551		687	

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e per 1,000 live births to women of the same age. "Unknown"
state.

TABLE 9. Reported legal abortions, by weeks of gestation and

State	≤8		9-10		11-12		13-
	No.	%	No.	%	No.	%	No.
Arizona†	6,332	42.6	4,294	28.9	2,146	14.4	1,263
Arkansas§	4,046	60.7	1.256	18.8	646	9.7	331
Colorado	6,674	38.0	5,540	31.6	2,818	16.1	1,260
Connecticut†	8,618	44.1	6,315	32.3	2,434	12.5	911
Dist. of Col.	12,465	53.9	4,285	18.5	2,159	9.3	1,712
Georgia	13,183	38.4	9,333	27.2	5,635	16.4	2,757
Hawaii	2,818	52.8	1,309	24.5	566	10.6	348
Idaho	1,111	46.6	717	30.1	407	17.1	116
Indiana†	10,453	68.1	3,160	20.6	1,369	8.9	45
Kansas†	2,483	34.0	2,018	27.6	1,452	19.9	409
Louisiana	8,915	46.7	4,615	24.1	2,044	10.7	1,290
Maine	2,391	54.2	1,149	26.0	491	11.1	222
Maryland	12,141	48.3	7,369	29.3	3,401	13.5	1,137
Massachusetts	14,085	45.6	9,635	31.2	4,504	14.6	1,234
Michigan¶	17,376	41.3	10,541	25.1	5,036	12.0	3,427
Minnesota	7,767	44.9	4,660	26.9	2,392	13.8	1,298
Mississippi	2,194	47.9	1,286	28.0	683	14.9	256
Missouri	8,077	40.0	6,108	30.2	3,158	15.6	1,366
Montana	1,155	31.9	1,257	34.7	718	19.8	293
Nevada	3,943	68.7	940	16.4	437	7.6	248
New Jersey	16,058	51.4	6,932	22.2	3,086	9.9	2,109
New Mexico	2,238	43.0	1,563	30.0	730	14.0	339
New York	76,747	50.3	38,270	25.1	17,779	11.7	8,891
(City)	49,753	51.4	22,802	23.6	10,807	11.2	6,037
(Upstate)	26,994	48.5	15,468	27.8	6,972	12.5	2,854
N. Carolina	14,704	42.7	9,306	27.0	5,216	15.1	2,974
N. Dakota	1,705	59.4	754	26.3	270	9.4	123
Oregon	6,366	48.5	3,620	27.6	1,828	13.9	698

and state of occurrence, selected states,* 1984

13-15		16-20		≥21		Unknown		Total	
No.	%	No.	%	No.	%	No.	%	No.	%
1,263	8.5	634	4.3	42	0.3	163	1.1	14,874	100.0
331	5.0	220	3.3	107	1.6	63	0.9	6,669	100.0
1,260	7.2	1,031	5.9	132	0.8	95	0.5	17,550	100.0
911	4.7	123	0.6	6	0.0	1,127	5.8	19,534	100.0
1,712	7.4	613[‖]	2.7	—	—	1,898	8.2	23,132	100.0
2,757	8.0	1,525	4.4	641	1.9	1,227	3.6	34,301	100.0
348	6.5	263	4.9	17	0.3	13	0.2	5,334	100.0
116	4.9	3	0.1	0	0.0	30	1.3	2,384	100.0
45	0.3	29	0.2	1	0.0	286	1.9	15,343	100.0
409	5.6	597	8.2	272	3.7	72	1.0	7,303	100.0
1,290	6.8	890	4.7	6	0.0	1,350	7.1	19,110	100.0
222	5.0	128	2.9	0	0.0	31	0.7	4,412	100.0
1,137	4.5	1,050	4.2	53	0.2	0	0.0	25,151	100.0
1,234	4.0	668	2.2	40	0.1	755	2.4	30,921	100.0
3,427	8.1	1,918	4.6	623	1.5	3,141	7.5	42,062	100.0
1,298	7.5	997	5.8	200	1.2	0	0.0	17,314	100.0
256	5.6	42	0.9	8	0.2	116	2.5	4,585	100.0
1,366	6.8	547	2.7	109	0.5	839	4.2	20,204	100.0
293	8.1	57	1.6	5	0.1	133	3.7	3,618	100.0
248	4.3	150	2.6	7	0.1	17	0.3	5,742	100.0
2,109	6.8	2,624	8.4	427	1.4	0	0.0	31,236	100.0
339	6.5	280	5.4	35	0.7	17	0.3	5,202	100.0
8,891	5.8	6,732	4.4	2,313	1.5	1,754	1.2	152,486	100.0
6,037	6.2	5,108	5.3	1,929	2.0	366	0.4	96,802	100.0
2,854	5.1	1,624	2.9	384	0.7	1,388	2.5	55,684	100.0
2,974	8.6	1,097	3.2	115	0.3	1,046	3.0	34,458	100.0
123	4.3	18	0.6	0	0.0	2	0.1	2,872	100.0
698	5.3	415	3.2	62	0.5	144	1.1	13,133	100.0

TABLE 9. Reported legal abortions, by weeks of gestation and

State	≤8		9-10		11-12		13-1
	No.	%	No.	%	No.	%	No.
Rhode Island†	3,641	49.1	2,325	31.3	787	10.6	382
S. Carolina†	7,069	60.4	3,161	27.0	1,137	9.7	265
Tennessee	8,252	39.1	6,757	32.0	3,915	18.5	1,429
Utah	1,490	37.0	1,398	34.8	722	18.0	214
Vermont	1,801	52.6	1,017	29.7	418	12.2	103
Virginia†	19,016	60.3	8,033	25.5	3,098	9.8	308
Washington†	15,165	54.6	7,156	25.8	3,014	10.8	1,254
Wyoming†	346	69.5	124	24.9	25	5.0	1
TOTAL	**320,825**	**48.1**	**176,203**	**26.4**	**84,521**	**12.7**	**39,013**

*All states for which data are available (33), and the District of Columb
†Weeks of gestation is physician's estimate.
§Data include 1,426 abortions that Arkansas residents had in other stat
¶Includes ≥21 weeks of gestation with the 16-20 weeks of gestation gro
**Data from Michigan's published report "Abortions in Michigan, 1984."
— Not reported.

and state of occurrence, selected states,* 1984 — Continued

13-15		16-20		≥21		Unknown		Total	
No.	%	No.	%	No.	%	No.	%	No.	%
382	5.1	262	3.5	3	0.0	22	0.3	7,422	100.0
265	2.3	56	0.5	7	0.1	9	0.1	11,704	100.0
,429	6.8	289	1.4	61	0.3	421	2.0	21,124	100.0
214	5.3	178	4.4	0	0.0	20	0.5	4,022	100.0
103	3.0	22	0.6	11	0.3	51	1.5	3,423	100.0
308	1.0	800	2.5	115	0.4	180	0.6	31,550	100.0
,254	4.5	1,004	3.6	170	0.6	20	0.1	27,783	100.0
1	0.2	0	0.0	0	0.0	2	0.4	498	100.0
,013	**5.9**	**25,262**	**3.8**	**5,588**	**0.8**	**15,044**	**2.3**	**666,456**	**100.0**

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TABLE 10. Reported legal abortions, by weeks of gestation and state

State	<8		9-10		11-12		13-15	
	No.	%	No.	%	No.	%	No.	%
Arizona†	6,457	41.4	4,678	30.0	2,180	14.0	1,229	7.9
Arkansas§	3,796	57.9	1,252	19.1	711	10.8	373	5.7
Colorado	5,868	37.7	5,159	33.2	2,496	16.0	1,158	7.4
Connecticut†	8,988	45.6	6,370	32.3	2,382	12.1	1,170	5.9
Dist. of Col.	9,296	47.6	3,808	19.5	2,197	11.2	1,531	7.8
Georgia	13,898	38.9	10,005	28.0	5,698	15.9	2,793	7.8
Hawaii	3,042	53.7	1,390	24.5	639	11.3	325	5.7
Idaho	1,001	44.4	696	30.9	456	20.2	79	3.5
Indiana†	10,532	69.4	3,129	20.6	1,178	7.8	58	0.4
Kansas†	2,309	35.8	1,714	26.6	1,273	19.7	414	6.4
Louisiana	8,198	45.2	4,561	25.2	1,724	9.5	1,151	6.3
Maine	2,376	53.5	1,142	25.7	447	10.1	308	6.9
Maryland	11,995	49.1	7,066	28.9	3,114	12.7	1,142	4.7
Massachusetts	15,327	43.6	10,623	30.2	4,669	13.3	1,407	4.0
Michigan¶**	18,821	44.1	11,395	26.7	5,415	12.7	3,517	8.2
Minnesota	8,157	46.1	4,802	27.2	2,353	13.3	1,184	6.7
Mississippi	2,382	45.0	1,555	29.4	802	15.2	338	6.4
Missouri	8,235	42.3	5,719	29.4	3,038	15.6	1,288	6.6
Montana	985	29.9	1,168	35.5	688	20.9	293	8.9
Nevada	4,506	70.4	995	15.5	478	7.5	259	4.0
New Jersey	16,325	52.2	6,945	22.2	2,798	8.9	2,045	6.5
New Mexico	2,258	47.0	1,316	27.4	609	12.7	338	7.0
New York	78,490	50.2	39,027	24.9	18,351	11.7	9,576	6.1
(City)	50,902	50.4	24,102	23.9	11,475	11.4	6,588	6.5
(Upstate)	27,588	49.8	14,925	26.9	6,876	12.4	2,988	5.4
N. Carolina†	14,429	43.8	8,784	26.7	4,812	14.6	2,705	8.2
N. Dakota	1,764	62.4	609	21.5	292	10.3	144	5.1
Oregon	5,563	46.1	3,263	27.1	1,594	13.2	730	6.1

tate of occurrence, selected states,* 1985

5	16-20		≥21		Unknown		Total	
%	No.	%	No.	%	No.	%	No.	%
7.9	776	5.0	47	0.3	237	1.5	15,604	100.0
5.7	231	3.5	128	2.0	70	1.1	6,561	100.0
7.4	663	4.3	119	0.8	90	0.6	15,553	100.0
5.9	237	1.2	3	0.0	579	2.9	19,729	100.0
7.8	439[†]	2.2	—	—	2,270	1.6	19,541	100.0
7.8	1,406	3.9	546	1.5	1,405	3.9	35,751	100.0
5.7	255	4.5	12	0.2	7	0.1	5,670	100.0
3.5	3	0.1	0	0.0	17	0.8	2,252	100.0
0.4	30	0.2	0	0.0	247	1.6	15,174	100.0
8.4	485	7.5	233	3.6	27	0.4	6,455	100.0
6.3	937	5.2	44	0.2	1,520	8.4	18,135	100.0
6.9	138[¶]	3.1	—	—	34	0.8	4,445	100.0
4.7	1,040	4.3	75	0.3	2	0.0	24,434	100.0
4.0	412	1.2	0	0.0	2,687	7.6	35,125	100.0
8.2	2,137	5.0	633	1.5	760	1.8	42,678	100.0
6.7	972	5.5	218	1.2	0	0.0	17,686	100.0
6.4	53	1.0	21	0.4	137	2.6	5,288	100.0
6.6	641	3.3	158	0.8	403	2.1	19,482	100.0
8.9	50	1.5	2	0.1	105	3.2	3,291	100.0
4.0	140	2.2	0	0.0	23	0.4	6,401	100.0
6.5	2,732	8.7	421	1.3	0	0.0	31,266	100.0
7.0	237	4.9	18	0.4	25	0.5	4,801	100.0
6.1	7,036	4.5	2,225	1.4	1,730	1.1	156,435	100.0
6.5	5,528	5.5	1,889	1.9	569	0.6	101,053	100.0
5.4	1,508	2.7	336	0.6	1,161	2.1	55,382	100.0
8.2	1,012	3.1	113	0.3	1,068	3.2	32,923	100.0
5.1	16	0.6	0	0.0	1	0.0	2,826	100.0
6.1	621	5.2	184	1.5	101	0.8	12,056	100.0

TABLE 10. Reported legal abortions, by weeks of gestation and st

State	<8		9-10		11-12		13-15	
	No.	%	No.	%	No.	%	No.	
Rhode Island†	3,464	44.5	2,534	32.6	1,005	12.9	469	6
S. Carolina†	6,941	59.9	3,067	26.5	1,185	10.2	310	2
Tennessee	8,107	38.5	6,863	32.6	4,048	19.2	1,410	6
Utah	1,950	47.2	1,232	29.8	560	13.6	200	4
Vermont††	1,926	55.1	1,011	28.9	426	12.2	119	3
Virginia†	19,388	60.7	8,151	25.5	3,092	9.7	306	1
Washington†	14,092	53.0	7,003	26.3	2,771	10.4	1,385	5
Wyoming†	272	62.4	138	31.7	21	4.8	2	(
TOTAL	**321,138**	**48.2**	**177,170**	**26.6**	**83,502**	**12.5**	**39,756**	**6**

*All states for which data are available (33), the District of Columbia, and M
†Weeks of gestation is physician's estimate.
§Includes 1,413 abortions that Arkansas residents had in other states.
‖Includes ≥21 weeks' gestation with 16-20 weeks' gestation.
¶Includes ≥21 weeks' gestation with 20 weeks' gestation.
**Data from published report, "Abortions in Michigan, 1985."
††Physician's estimate of gestational age used when calculation not possib
— Not reported.

nd state of occurrence, selected states,* 1985 — Continued

13-15		16-20		≥21		Unknown		Total	
.	%	No.	%	No.	%	No.	%	No.	%
69	6.0	293	3.8	0	0.0	13	0.2	7,778	100.0
10	2.7	57	0.5	5	0.0	13	0.1	11,578	100.0
10	6.7	281	1.3	71	0.3	289	1.4	21,069	100.0
00	4.8	159	3.9	0	0.0	28	0.7	4,129	100.0
19	3.4	11	0.3	4	0.1	0	0.0	3,497	100.0
06	1.0	841	2.6	126	0.4	47	0.1	31,951	100.0
35	5.2	1,125	4.2	197	0.7	8	0.0	26,581	100.0
2	0.5	0	0.0	0	0.0	3	0.7	436	100.0
56	**6.0**	**25,466**	**3.8**	**5,603**	**0.8**	**13,946**	**2.1**	**666,581**	**100.0**

and New York City.

ossible.

TABLE 11. Reported legal abortions, by type of procedure and state of

State	Suction curettage		Sharp curettage		Intrauterine saline instillation		Intrauterine prostaglandin instillation	
	No.	%	No.	%	No.	%	No.	%
Arizona	16,6444	98.5	22	0.1	1	0.0	2	0.0
Arkansas	6,299	94.5	17	0.3	0	0.0	121	1.8
Colorado	16,299	92.9	43	0.2	6	0.0	903	5.1
Connecticut	19,169[§]	98.1	30	0.2	22	0.1	0	0.0
Dist. of Col.	18,710	80.9	2,583	11.2	286	1.2	0	0.0
Georgia	30,973[‖]	90.3	1,646	4.8	1,430	4.2	147	0.4
Hawaii	5,108	95.8	9	0.2	0	0.0	52	1.0
Idaho	2,382	99.9	0	0.0	1	0.0	0	0.0
Indiana	14,807	96.5	28	0.2	1	0.0	0	0.0
Kansas	7,231	99.0	20	0.3	7	0.1	7	0.1
Louisiana	17,227	90.1	11	0.1	1	0.0	0	0.0
Maine	4,332	98.2	43	1.0	3	0.1	8	0.2
Maryland	23,903	95.0	217	0.9	189	0.8	154	0.6
Massachusetts	30,301	98.0	52	0.2	447	1.4	95	0.3
Michigan	40,031	95.2	484	1.2	1,492	3.5	54	0.1
Minnesota	15,658	90.4	11	0.1	—[¶]	—	—[¶]	—
Mississippi	4,541	99.0	8	0.2	0	0.0	7	0.2
Missouri	18,710	92.6	25	0.1	0	0.0	2	0.0
Montana	3,554	96.2	12	0.3	3	0.1	45	1.2
Nebraska	5,992	99.8	12	0.2	0	0.0	0	0.0
Nevada	5,701	99.3	1	0.0	1	0.0	0	0.0
New Jersey	20,499	65.6	9,446	30.2	1,041	3.3	62	0.2
New Mexico	4,898	94.2	11	0.2	2	0.0	0	0.0
New York	138,542	90.9	2,495	1.6	4,959	3.3	556	0.4
NY City	87,490	90.4	522	0.5	3,681	3.8	305	0.3
NY State	51,052	91.7	1,973	3.5	1,278	2.3	251	0.5
N. Carolina	31,777	92.2	451	1.3	591	1.7	352	1.0

te of occurrence, selected states,* 1984

e in	Hysterotomy/ hysterectomy		Other†		Unknown		Total	
	No.	%	No.	%	No.	%	No.	%
0	1	0.0	0	0.0	204	1.4	14,874	100.00
8	5	0.1	152	2.3	75	1.1	6,669	100.00
1	5	0.0	275	1.6	19	0.1	17,550	100.00
0	4	0.0	32	0.2	277	1.4	19,534	100.00
0	0	0.0	0	0.0	1,553	6.7	23,132	100.00
4	25	0.1	51	0.1	29	0.1	34,301	100.00
0	4	0.1	159	3.0	2	0.0	5,334	100.00
0	1	0.0	0	0.0	0	0.0	2,384	100.00
0	3	0.0	239	1.6	265	1.7	15,343	100.00
1	0	0.0	37	0.5	1	0.0	7,303	100.00
0	2	0.0	616	3.2	1,253	6.6	19,110	100.00
2	1	0.0	25	0.6	0	0.0	4,412	100.00
6	3	0.0	682	2.7	3	0.0	25,151	100.00
3	0	0.0	26	0.1	0	0.0	30,921	100.00
1	0	0.0	1	0.0	0	0.0	42,062	100.00
–	–[1]	–	1,645[1]	9.5	0	0.0	17,314	100.00
2	15	0.3	12	0.3	2	0.0	4,585	100.00
0	3	0.0	1,381	6.8	83	0.4	20,204	100.00
2	2	0.1	2	0.1	0	0.0	3,618	100.00
0	1	0.0	0	0.0	1	0.0	6,006**	100.00
0	0	0.0	1	0.0	38	0.7	5,742	100.00
2	3	0.0	54	0.2	131	0.4	31,236	100.00
0	0	0.0	287	5.5	4	0.1	5,202	100.00
4	30	0.0	4,451	2.9	1,453	1.0	152,486	100.00
3	8	0.0	4,183	4.3	613	0.6	96,802	100.00
5	22	0.0	268	0.5	840	1.5	55,684	100.00
0	25	0.1	22	0.1	1,240	3.6	34,458	100.00

TABLE 11. Reported legal abortions, by type of procedure and state o

State	Suction curettage		Sharp curettage		Intrauterine saline instillation		Intrauterine prostaglandin instillation	
	No.	%	No.	%	No.	%	No.	%
N. Dakota	2,869	99.9	0	0.0	0	0.0	0	0.0
Ohio	38,959	82.0	8,539	18.0	4	0.0	0	0.0
Oregon	12,273[§]	93.5	112	0.9	0	0.0	21	0.2
Pennsylvania	56,177	94.8	2,003	3.4	845	1.4	149	0.3
Rhode Is land	7,302	98.4	52	0.7	35	0.5	1	0.0
S. Carolina	11,592	99.0	17	0.1	6	0.1	56	0.5
Tennessee	21,034	99.6	19	0.1	0	0.0	64	0.3
Utah	4,012	99.8	2	0.0	0	0.0	0	0.0
Vermont	3,412[‖]	99.7	4	0.1	0	0.0	0	0.0
Virginia	30,864	97.8	51	0.2	243	0.8	153	0.5
Washington	27,351[¶]	98.4	9	0.0	244	0.9	167	0.6
Wyoming	492	98.8	0	0.0	0	0.0	0	0.0
TOTAL	**717,625**	**92.1**	**28,485**	**3.7**	**11,860**	**1.5**	**3,178**	**0.4**

*All states for which data are available (36), the District of Columbia, and New
†Includes instillation procedures not reported as a specific category, and proce
§Includes abortions done by both suction and sharp curettage.
‖Includes dilatation and evacuation procedures.
¶Includes dilatation and evacuation procedures, instillation procedures, and hy
**Does not add to total number of abortions because of some reported combi
††Includes 105 intrauterine prostaglandin instillation procedures.
— Not reported.

ate of occurrence, selected states,* 1984 — Continued

ne din n	Hysterotomy/ hysterectomy		Other†		Unknown		Total	
%	No.	%	No.	%	No.	%	No.	%
.0	0	0.0	0	0.0	3	0.1	2,872	100.00
.0	0	0.0	0	0.0	0	0.0	47,502**	100.00
.2	4	0.0	109††	0.8	614	4.7	13,133	100.00
.3	2	0.0	50	0.1	32	0.1	59,258	100.00
.0	5	0.1	13	0.2	14	0.2	7,422	100.00
.5	8	0.1	23	0.2	2	0.0	11,704	100.00
.3	4	0.0	0	0.0	3	0.0	21,124	100.00
.0	0	0.0	2	0.0	6	0.1	4,022	100.00
.0	0	0.0	7	0.2	0	0.0	3,423	100.00
.5	16	0.1	45	0.1	178	0.6	31,550	100.00
.6	8	0.0	0	0.0	4	0.0	27,783	100.00
.0	0	0.0	0	0.0	6	1.2	498	100.00
.4	**180**	**0.0**	**10,399**	**1.3**	**7,495**	**1.0**	**779,222**	**100.00**

New York City.
procedures reported as "other" (see footnote**).

nd hysterectomy/hysterotomy as "other."
ombination procedures.

TABLE 12. Reported legal abortions, by type of procedure and state

State	Suction curettage		Sharp curettage		Intrauterine saline instillation		Intrauterine prostaglandin instillation	
	No.	%	No.	%	No.	%	No.	%
Arizona	15,157	97.1	18	0.1	1	0.0	1	0.0
Arkansas	5,622	85.7	82	1.2	2	0.0	132	2.0
Colorado	14,951	96.1	42	0.3	3	0.0	166	1.1
Connecticut	19,062[§]	96.6	27	0.1	9	0.0	0	0.0
Dist. of Col.	17,108	87.5	0	0.0	146	0.7	0	0.0
Georgia	32,199[‖]	90.1	2,288	6.4	1,113	3.1	66	0.2
Hawaii	5,438	95.9	12	0.2	0	0.0	40	0.7
Idaho	2,250	99.9	0	0.0	0	0.0	1	0.0
Indiana	14,375	94.7	68	0.4	0	0.0	1	0.0
Kansas	6,418	99.4	7	0.1	5	0.1	9	0.1
Louisiana	16,987	93.7	1	0.0	0	0.0	0	0.0
Maine	4,406	99.1	27	0.6	2	0.0	3	0.1
Maryland	23,171	94.8	233	1.0	213	0.9	331	1.4
Massachusetts	34,758	99.0	93	0.3	8	0.0	248	0.7
Michigan	40,974	96.0	198	0.5	1,452	3.4	51	0.1
Minnesota	16,084	90.9	8	0.0	—[¶]	—	—[¶]	—
Mississippi	5,252	99.3	6	0.1	0	0.0	11	0.2
Missouri	17,630	90.5	137	0.7	0	0.0	2	0.0
Montana	3,252	98.8	0	0.0	0	0.0	39	1.2
Nebraska	6,009	99.8	9	0.1	0	0.0	0	0.0
Nevada	6,363	99.4	2	0.0	0	0.0	0	0.0
New Jersey	21,210	67.8	8,863	28.3	1,082	3.5	96	0.3
New Mexico	4,723	98.4	17	0.4	1	0.0	0	0.0
New York	145,945	93.3	2,342	1.5	4,966	3.2	601	0.4
(City)	94,702	93.7	766	0.8	3,821	3.8	244	0.2
(Upstate)	51,243	92.5	1,576	2.8	1,145	2.1	357	0.6

state of occurrence, selected states,* 1985

ine ndin on	Hysterotomy/ hysterectomy		Other†		Unknown		Total	
%	No.	%	No.	%	No.	%	No.	%
0.0	0	0.0	0	0.0	427	2.7	15,604	100.00
2.0	1	0.0	127	1.9	595	9.1	6,561	100.00
1.1	8	0.1	375	2.4	8	0.1	15,553	100.00
0.0	0	0.0	30	0.2	601	3.0	19,729	100.00
0.0	7	0.0	0	0.0	2,280	11.7	19,541	100.00
0.2	20	0.1	31	0.1	34	0.1	35,751	100.00
0.7	3	0.1	177	3.1	0	0.0	5,670	100.00
0.0	0	0.0	1	0.0	0	0.0	2,252	100.00
0.0	2	0.0	347	2.3	381	2.5	15,174	100.00
0.1	3	0.0	10	0.2	3	0.0	6,455	100.00
0.0	0	0.0	153	0.8	994	5.5	18,135	100.00
0.1	1	0.0	6	0.1	0	0.0	4,445	100.00
1.4	6	0.0	479	2.0	1	0.0	24,434	100.00
0.7	2	0.0	16	0.0	0	0.0	35,125	100.00
0.1	3	0.0	0	0.0	0	0.0	42,678	100.00
—	—¶	—	1,594	9.0	0	0.0	17,686	100.00
0.2	10	0.2	9	0.2	0	0.0	5,288	100.00
0.0	2	0.0	1,619	8.3	92	0.5	19,482	100.00
1.2	0	0.0	0	0.0	0	0.0	3,291	100.00
0.0	0	0.0	0	0.0	2	0.0	6,020**	100.00
0.0	0	0.0	0	0.0	36	0.6	6,401	100.00
0.3	4	0.0	6	0.0	5	0.0	31,266	100.00
0.0	1	0.0	36	0.7	23	0.5	4,801	100.00
0.4	29	0.0	1,133	0.7	1,419	0.9	156,435	100.00
0.2	11	0.0	868	0.9	641	0.6	101,053	100.00
0.6	18	0.0	265	0.5	778	1.4	55,382	100.00

TABLE 12. Reported legal abortions, by type of procedure and state of o

State	Suction curettage		Sharp curettage		Intrauterine saline instillation		Intrauterine prostaglandin instillation		Hy hy
	No.	%	No.	%	No.	%	No.	%	No
N. Carolina	31,709	96.3	315	1.0	406	1.2	296	0.9	1
N. Dakota	2,826	100.0	0	0.0	0	0.0	0	0.0	
Ohio	35,144	83.3	7,065	16.7	0	0.0	0	0.0	
Oregon	11,724[‡]	97.2	2	0.0	0	0.0	24	0.2	
Pennsylvania	52,816[††]	98.8	0	0.0	476	0.9	154	0.3	
Rhode Island	7,723	99.3	40	0.5	0	0.0	0	0.0	
S. Carolina	11,478	99.1	22	0.2	2	0.0	61	0.5	
Tennessee	20,938	99.4	15	0.1	0	0.0	83	0.4	1
Utah	4,124	99.9	1	0.0	0	0.0	0	0.0	
Vermont	3,485[§§]	99.7	12	0.3	0	0.0	0	0.0	
Virginia	31,306	98.0	46	0.1	142	0.4	140	0.4	1
Washington	26,199[¶¶]	98.6	11	0.0	227[¶¶]	0.9	134	0.5	
Wyoming	418	95.9	17	3.9	0	0.0	0	0.0	
TOTAL	**719,234**	**93.6**	**22,026**	**2.9**	**10,256**	**1.3**	**2,690**	**0.4**	**1**

*All states for which data are available (36), the District of Columbia, and New Yo
†Includes instillation procedures not reported as a specific category, and procedu
§Includes abortions done by both suction and sharp curettage.
‖Includes dilatation and evacuation procedures.
¶Includes dilatation and evacuation procedures, installation procedures, and hyste
**Does not add to total number of abortions because of some reported combinat
††"Suction" includes suction and sharp curettage and dilatation and evacuation p
§§Includes 1,316 dilatation and evacuation procedures and 16 other procedures.
¶¶Includes dilatation and evacuation procedures with suction curettage and inclu
prostaglandin instillation.
— Not reported.

of occurrence, selected states,* 1985 — Continued

Hysterotomy/ hysterectomy		Other†		Unknown		Total	
No.	%	No.	%	No.	%	No.	%
18	0.1	93	0.3	86	0.3	32,923	100.00
0	0.0	0	0.0	0	0.0	2,826	100.00
0	0.0	0	0.0	0	0.0	42,209**	100.00
0	0.0	101	0.8	205	1.7	12,056	100.00
7	0.0	11	0.0	1	0.0	53,465	100.00
0	0.0	2	0.0	13	0.2	7,778	100.00
6	0.1	9	0.1	0	0.0	11,578	100.00
18	0.1	6	0.0	9	0.0	21,069	100.00
0	0.0	0	0.0	4	0.1	4,129	100.00
0	0.0	0	0.0	0	0.0	3,497	100.00
10	0.0	78	0.2	229	0.7	31,951	100.00
5	0.0	3	0.0	2	0.0	26,581	100.00
0	0.0	0	0.0	1	0.2	436	100.00
166	**0.0**	**6,452**	**0.8**	**7,451**	**1.0**	**768,275**	**100.00**

w York City.
cedures reported as "other" (see footnote **).

hysterectomy/hysterotomy as "other."
bination procedures.
ion procedures.
es.
includes vaginal suppository administration with intrauterine

TABLE 13. Percentage distribution and abortion ratios, by race, 1984 and 1985

Year	Race			Total
	White	Black/other	Unknown	
	% Distribution*			
1984	65.8	32.2	2.0	100.0
1985	65.2	32.6	2.2	100.0
	Abortion ratios†			
1984	288	475		331
1985	277	472		321

*1984 based on 535,182 abortions from 29 states; 1985 based on 544,778 abortions from 30 states.
†Calculated as the number of legal abortions obtained by women of a given race per 1,000 live births to women of the same race.

TABLE 14. Percentage distribution and abortion ratios, by marital status, 1984 and 1985

Year	Marital status			Total
	Married	Unmarried	Unknown	
	% Distribution*			
1984	19.9	78.2	1.9	100.0
1985	18.3	79.5	2.2	100.0
	Abortion ratios†			
1984	93	1,267	354	
1985	80	1,174	329	

*1984 based on 592,304 abortions from 30 states; 1985 based on 578,326 abortions from 30 states.
†Calculated as the number of legal abortions obtained by women of a given marital status per 1,000 live births to women of the same marital status.

TABLE 15. Percentage distribution and abortion ratios, by number of previous live births, 1984 and 1985*

Year	Live births						
	0	1	2	3	≥4	Unknown	Total
	% Distribution†						
1984	55.8	21.0	14.3	5.1	2.6	1.1	100.0
1985	55.1	21.4	14.4	5.1	2.5	1.5	100.0
	Abortion ratios†						
1984	459	219	320	313	244	342	
1985	451	216	299	182	215	318	

*1984 based on 567,675 abortions from 31 states; 1985 based on 572,736 abortions from 31 states.
†Calculated on the number of legal abortions obtained by women with a particular per 1,000 live births compared with women with the same number of live births.

TABLE 16. Percentage distribution of reported legal abortions, by number of previous induced abortions, 1984 and 1985*

Year	Previous induced abortions					
	0	1	2	≥3	Unknown	Total
	% Distribution*					
1984	57.8	24.5	9.0	4.1	4.6	100.0
1985	56.8	25.0	9.6	4.7	3.8	100.0

*1984 based on 596,575 abortions from 31 states; 1985 based on 556,009 abortions from 31 states.

TABLE 17. Number and percentage of reported legal abortions, by race, age group, and marital status, 1984

Age group/ marital status	Race					
	White		Black/other		Total	
	No.	%	No.	%	No.	%
Age group (years)						
<15	2,661	0.7	3,301	1.9	5,962	1.1
15-19	100,496	26.3	40,035	22.9	140,531	25.3
20-24	135,954	35.6	59,722	34.1	195,676	35.2
25-29	76,508	20.1	39,548	22.6	116,056	20.9
30-34	40,389	10.6	20,936	12.0	61,325	11.0
35-39	19,850	5.2	9,064	5.2	28,914	5.2
≥40	5,575	1.5	2,408	1.4	7,983	1.4
TOTAL (32 states)	**381,433**	**100.0**	**175,014**	**100.0**	**556,447**	**100.0**
Marital status						
Married	74,792	21.0	33,030	19.5	107,822	20.5
Unmarried	282,207	79.0	136,118	80.5	418,325	79.5
TOTAL (31 states)	**356,999**	**100.0**	**169,148**	**100.0**	**526,147**	**100.0**

TABLE 18. Number and percentage of reported legal abortions, by race, age group, and marital status, 1985

Age group/ marital status	Race					
	White		Black/other		Total	
	No.	%	No.	%	No.	%
Age group (years)						
<15	2,676	0.7	3,361	1.9	6,037	1.1
15-19	96,506	26.0	40,974	22.9	137,480	25.0
20-24	130,659	35.2	60,971	34.0	191,630	34.8
25-29	75,050	20.2	40,336	22.5	115,386	21.0
30-34	40,338	10.9	21,477	12.0	61,815	11.2
35-39	20,493	5.5	9,690	5.4	30,183	5.5
≥40	5,587	1.5	2,422	1.4	8,009	1.5
TOTAL (32 states)	**371,309**	**100.0**	**179,231**	**100.0**	**550,540**	**100.0**
Marital status						
Married	68,118	19.6	30,658	17.8	98,776	19.0
Unmarried	279,304	80.4	141,430	82.2	420,734	81.0
TOTAL (31 states)	**347,422**	**100.0**	**172,088**	**100.0**	**519,510**	**100.0**

TABLE 19. Number and percentage of reported legal abortions, by w

Procedure, age group, race	≤8		9-10		11-12	
	No.	%	No.	%	No.	%
Type of procedure						
Curettage (suction and sharp)	326,523	99.6	171,727	99.6	81,425	98.
Intrauterine saline instillation	258	0.1	271	0.2	373	0.
Intrauterine prostaglandin instillation	75	0.0*	135	0.1	189	0.
Hysterotomy/ hysterectomy	55	0.0*	22	0.0*	26	0.
Other	772	0.2	336	0.2	609	0.
TOTAL (33 states)	**327,683**	**100.0**	**172,491**	**100.0**	**82,622**	**100.**
Age group (years)						
<15	2,040	0.7	1,571	1.0	962	1.
15-19	60,306	20.6	40,811	26.9	22,700	31.
20-24	101,201	34.6	54,642	36.1	26,199	36.
25-29	67,472	23.1	30,133	19.9	13,190	18.
30-34	37,931	13.0	15,337	10.1	6,048	8.
35-39	18,255	6.2	7,032	4.6	2,730	3.
≥40	4,892	1.7	1,974	1.3	711	1.
TOTAL (33 states)	**292,097**	**100.0**	**151,500**	**100.0**	**72,540**	**100.**
Race						
White	182,114	71.3	93,799	68.2	43,288	64.
Black/other	73,140	28.7	43,775	31.8	23,593	35.
TOTAL (30 states)	**255,254**	**100.0**	**137,574**	**100.0**	**66,881**	**100.**

*<0.05%

by weeks of gestation, procedure, age group, and race, 1984

Weeks of gestation								
12	13-15		16-20		≥21		Total	
%	No.	%	No.	%	No.	%	No.	%
98.6	32,850	88.2	14,004	54.9	1,945	35.1	628,474	96.5
0.5	1,231	3.3	5,370	21.1	2,315	41.7	9,818	1.5
0.2	383	1.0	1,714	6.7	349	6.3	2,845	0.4
0.0*	18	0.0*	30	0.1	8	0.1	159	0.0*
0.7	2,755	7.4	4,383	17.2	931	16.8	9,786	1.5
100.0	**37,237**	**100.0**	**25,501**	**100.0**	**5,548**	**100.0**	**651,082**	**100.0**
1.3	638	2.0	609	2.7	174	3.6	5,994	1.0
31.3	11,225	34.6	8,489	37.8	1,838	37.5	145,369	25.2
36.1	11,498	35.4	7,653	34.1	1,613	32.9	202,806	35.2
18.2	5,426	16.7	3,276	14.6	698	14.2	120,195	20.9
8.3	2,298	7.1	1,461	6.5	322	6.6	63,397	11.0
3.8	1,067	3.3	731	3.3	202	4.1	30,017	5.2
1.0	312	1.0	245	1.1	54	1.1	8,188	1.4
100.0	**32,464**	**100.0**	**22,464**	**100.0**	**4,901**	**100.0**	**575,966**	**100.0**
64.7	18,468	61.2	12,053	57.3	2,805	58.4	352,527	68.4
35.3	11,697	38.8	8,974	42.7	2,002	41.6	163,181	31.6
100.0	**30,165**	**100.0**	**21,027**	**100.0**	**4,807**	**100.0**	**515,708**	**100.0**

TABLE 20. Number and percentage of reported legal abortions, by wee

Procedure, age group, race	≤8		9-10		11-12		Wee
	No.	%	No.	%	No.	%	
Type of procedure							
Curettage (suction and sharp)	312,967	99.7	162,516	99.7	75,633	98.9	
Intrauterine saline instillation	227	0.1	225	0.1	331	0.4	
Intrauterine prostaglandin instillation	32	0.0*	50	0.0*	67	0.1	
Hysterotomy/ hysterectomy	50	0.0*	27	0.0*	20	0.0*	
Other	623	0.2	182	0.1	418	0.5	
TOTAL (33 states)	**313,899**	**100.0**	**163,000**	**100.0**	**76,469**	**100.0**	
Age group (years)							
<15	2,076	0.7	1,582	1.1	981	1.4	
15-19	59,246	20.4	40,154	26.7	21,915	31.0	
20-24	99,802	34.3	53,684	35.7	25,161	35.6	
25-29	67,271	23.1	30,353	20.2	13,030	18.4	
30-34	38,402	13.2	15,396	10.2	6,101	8.6	
35-39	19,296	6.6	7,329	4.9	2,748	3.9	
≥40	4,918	1.7	2,018	1.3	738	1.0	
TOTAL (33 states)	**291,011**	**100.0**	**150,516**	**100.0**	**70,674**	**100.0**	
Race							
White	180,044	70.2	91,904	67.0	41,738	63.8	
Black/other	76,292	29.8	45,306	33.0	23,652	36.2	
TOTAL (33 states)	**256,336**	**100.0**	**137,210**	**100.0**	**65,390**	**100.0**	

*<0.05%

y weeks of gestation, procedure, age group, and race, 1985

	Weeks of gestation							
	13-15		16-20		≥21		Total	
%	No.	%	No.	%	No.	%	No.	%
98.9	33,552	91.3	15,545	62.8	3,151	51.4	603,364	97.2
0.4	1,308	3.6	5,142	20.8	2,031	33.1	9,264	1.5
0.1	278	0.8	1,401	5.7	324	5.3	2,152	0.3
0.0*	19	0.1	21	0.1	5	0.1	142	0.0*
0.5	1,580	4.3	2,652	10.7	618	10.1	6,073	1.0
00.0	36,737	100.0	24,761	100.0	6,129	100.0	620,995	100.0
1.4	634	1.9	661	3.0	195	3.6	6,129	1.1
31.0	11,511	34.9	8,293	37.1	1,978	36.7	143,097	25.0
35.6	11,612	35.2	7,574	33.9	1,764	32.8	199,597	34.8
18.4	5,437	16.5	3,324	14.9	810	15.0	120,225	21.0
8.6	2,432	7.4	1,533	6.9	380	7.1	64,244	11.2
3.9	1,080	3.3	748	3.3	192	3.6	31,393	5.5
1.0	320	1.0	213	1.0	64	1.2	8,271	1.4
00.0	33,026	100.0	22,346	100.0	5,383	100.0	572,956	100.0
63.8	18,429	60.5	11,765	55.3	2,824	58.7	346,704	67.3
36.2	12,042	39.5	9,525	44.7	1,984	41.3	168,801	32.7
00.0	30,471	100.0	21,290	100.0	4,808	100.0	515,505	100.0

TABLE 21. Abortion-related deaths reported to CDC, by type of abortion, United States, 1972-1985

Year	Induced		Spontaneous	Other	Unknown	Total	Death-to-case rate
	Legal	Illegal					
1972	24	39	25	0	2	90	4.1
1973	25	19	10	0	3	57	4.1
1974	26	6	21	0	1	54	3.4
1975	29	4	14	0	1	48	3.4
1976	11	2	13	0	1	27	1.1
1977	17	4	16	0	0	37	1.6
1978	9	7	9	1	0	26	0.8
1979	18	0	9	0	0	27	1.4
1980	9	1	6	0	1	17	0.7
1981	7	1	3	0	0	11	0.5
1982	11	1	6	0	0	18	0.8
1983	10	1	7	0	0	18	0.8
1984	11	0	6	1	0	18	0.8
1985	6	1	6	0	1	14	0.5

FIGURE 1. Legal abortions, by year, United States, 1970-1985

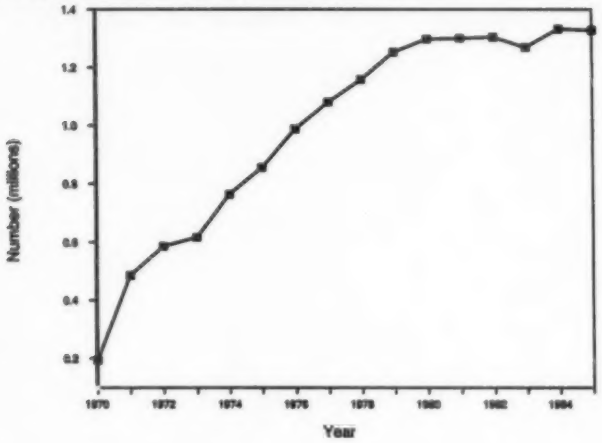


FIGURE 2. Abortion rations, by year, United States, 1970-1985

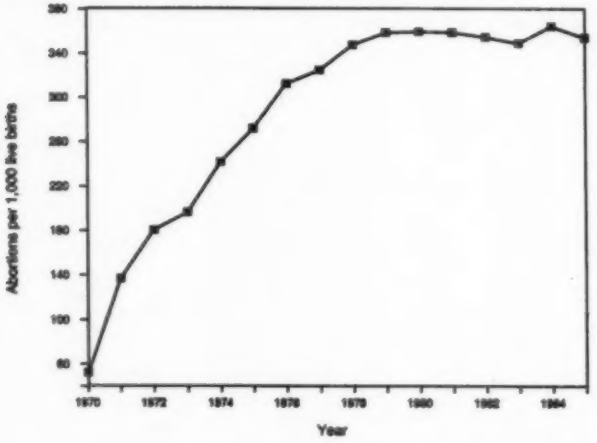
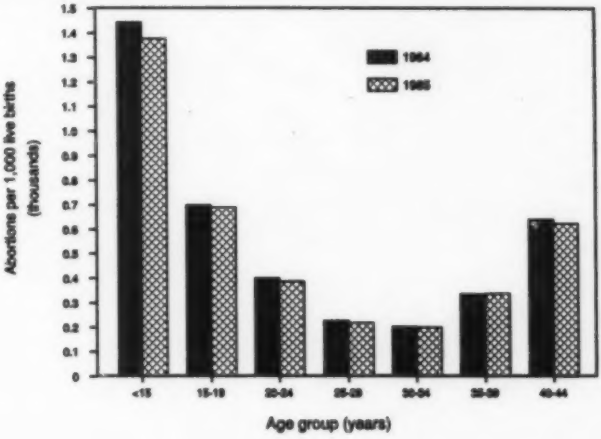


FIGURE 3. Abortion rates by year, United States, 1970-1985

FIGURE 4. Abortion ratios, by age group, United States, 1984-1985



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Source: Association for Vital Records and Health Statistics

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